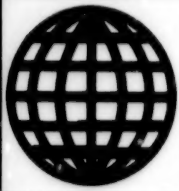


JPRS-TEN-94-026

8 November 1994



**FOREIGN  
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# ***JPRS Report***

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# **Environmental Issues**

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# Environmental Issues

JPRS-TEN-94-026

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8 November 1994

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### **Finland May Halt Nuclear Waste Shipments to Russia**

MM2710102794 *Moscow IZVESTIYA in Russian*  
27 Oct 94 p 2

[Report by Marat Zubko: "Radioactive Waste Sent from Finland to Russia Again"]

[FBIS Translated Text] Helsinki—A special train from Russia has once again rolled up at the railroad platform outside the nuclear electric power station in the Finnish city of Lovisa and, according to Helsinki television, is to be loaded with 26 tonnes of radioactive waste.

The tonnes of spent nuclear reactor fuel rods are once again being sent to Chelyabinsk-65. This is the third trainload of this kind of freight to be exported to Russia in the post-Soviet era, in line with an agreement that Finland's Imatran Voyma [name as transliterated] power company concluded with USSR organizations.

Nonetheless hope is emerging that this third trainload will be the last. Not because the Russian authorities want to stop our country's transformation into a radioactive dumping ground. The point is that voices opposing the practice of exporting spent fuel rods to Russia can now be heard increasingly forcefully in Finland itself. And they have been joined by certain members of the Finnish Government.

Finland is drafting a law whereby exporting this kind of waste to other countries will be banned. Now that Imatran Voyma has sent a third trainload to Russia, it will have freed up its bedrock storage facilities [podskalnyye ploshchadi] to handle around five years' storage of fuel rods.

### **Tokyo, U.S. Agree Manufacturers Must Pay for Waste Disposal**

OW2710012894 *Tokyo KYODO in English*  
0057 GMT 27 Oct 94

[FBIS Transcribed Text] Washington, Oct. 26 KYODO—Japan and the United States agreed Wednesday [26 October] that manufacturers of consumer goods should bear some of the costs of clearing up the waste generated by their products.

Japanese and U.S. Government officials struck the agreement after a two-day meeting on how to cope with the huge amount of trash which threatens to overwhelm the waste-management capacities of local authorities.

A joint communique released after the meeting said manufacturers bear a "shared responsibility" for municipal waste disposal and called for government efforts to "internalize" the costs of managing solid waste materials.

However, the communique contains no specific steps to be taken to translate the countries' commitment into concrete policy.

"The implementation of measures is left to the discretion of each side," said Masahiro Fujiwara, director of the Water Supply and Environmental Sanitation Department at Japan's Ministry of Health and Welfare.

Fujiwara, who headed the Japanese delegation to the meeting, told reporters that the Japanese Government plans to implement the cost-sharing principle by presenting a bill to the Diet, possibly sometime next year.

He said the proposed waste disposal law will be aimed primarily at solid waste created by containers of consumer products, such as bottles, metal cans and plastic containers.

"As things stand now, manufacturers of these products have little economic incentive to minimize waste. It is the taxpayer who has to pay for waste collection," he said.

According to government officials, in Japan discarded packaging accounts for more than half of all solid waste collected by local authorities.

### **Iranian Envoy, Russian Environment Minister Discuss Caspian Sea**

LD2510200594 *Tehran IRNA in English*  
1913 GMT 25 Oct 94

[FBIS Transcribed Text] Moscow, Oct. 25, IRNA—The Russian Minister of the Environment and Natural Resources Danilov-Danilyan and Iranian Ambassador to Moscow Mehdi Safari here today agreed that the protection of the marine environment of the Caspian Sea can be the most important element of cooperation between the two countries.

The Iranian ambassador told the Russian Minister that Tehran and Moscow have long term common interests in the Caspian Sea and can uphold their cooperation within the framework of the projected organization of the Caspian Sea littoral states.

Safari said the Islamic Republic is ready to offer every help in every area for protection of the environment of the Caspian.

The Caspian, the world's largest inland sea, is a rich source of many species of edible fish, including sturgeons which yields the prized caviar, a delicacy on international markets.

Iran and the Russian Federation respectively border the southern and northern shores of the Caspian, which on the southwest is hemmed in by the Azerbaijan Republic, on the southeast by Turkmenistan and on the northeast by Kazakhstan.

The Caspian is believed to contain rich hydrocarbon reserves, the wanton and uncoordinated exploitation of which by littoral states, would lead to disastrous ecological results.

### **Expedition Charts Nuclear Waste Dumped in Kara Sea**

BR1910114094 *Oslo AFTENPOSTEN in Norwegian*  
18 Oct 94 p 12

[Report by Ole Mathismoen: "Rusty Nuclear Waste Barrels Leaking"]

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[FBIS Translated Text] Barrels of atomic waste sunk in the Kara Sea sea have rusted through, and radioactivity can be measured on the sea floor around the waste.

But researchers are counting on the material which escapes being diluted by the large masses of water in the area. This autumn's Norwegian-Russian research expedition to the last two fjords on the east side of Novaya Zemlya revealed that some of the barrels of nuclear waste with low and medium levels of radioactivity were in very bad condition. Containers and submarine wrecks with reactors were still intact.

However, the researchers' conclusions are reassuring: "Even though we measured high concentrations of caesium around the barrels themselves, concentrations were almost normal just 20-30 meters away," said expedition leader Lars Foyn of the Marine Research Institute in Bergen.

Foyn is not particularly worried about the future either, about the day the reactors and the scuttled submarines spring leaks due to corrosion. "Leakage will occur very slowly. There is almost no biological life in these fjords on Novaya Zemlya. In fact, there are very few fish in the whole Kara Sea sea, whereas the quantities of water are enormous. This will mean rapid dilution. The currents from the Kara Sea flow into the Arctic Sea before they emerge between Svalbard and Greenland. By then it will be impossible to detect radioactive substances from Kara Sea," Foyn said.

He added that radioactive emissions from the British Sellafield plant in the 1970's can still be detected in the Barents Sea.

#### **Bellona**

Several years ago, Bellona [Norwegian environmental organization] was responsible for revealing the details of the Soviet Union's dumping of nuclear waste in Kara Sea, after the first close contacts with the nonmilitary atomic icebreaker company, the Murmansk Shipping Company, had been established. Frederic Hauge commented on the summer's discoveries as follows:

"This gives us time. We can take our time evaluating what has been dumped, relating it to all the other sources on the Kola Peninsula. After all, only 17 reactors have been dumped in the Kara Sea, while we know that more than 250 will be removed from old submarines during the next few years. It will be essential to get our priorities right," Hauge said.

This year's expedition was the third. In 1992, measurements were taken in a number of places, but the emphasis was on establishing contacts and trust. Last year the expedition was allowed to visit a number of fjords, but it did not receive the military's permission to visit Abrosimovo Bay, where a great deal of material with medium and low levels of radioactivity has been dumped. After several contacts at high government levels, authorization was granted. For the first time, reactors, barrels, containers and submarines in one of Russia's nuclear graveyards have been photographed, measured, and studied.

In neighboring Stepovogo Bay the expedition found a new dumping area for barrels of waste which is not mentioned in the Russian white paper on dumping in the north. "The condition of the containers was very bad. When we pushed a remote control measuring device against one of them, it went right through the rusty metal wall. I was surprised at how high the caesium concentration which we measured in the sediment of the surrounding sea bed actually was, but I was happy that it had diffused so little. Waste containers lay scattered all around, and a few of them had been washed ashore. The Russians were naturally quite embarrassed about how sloppily this work had been done. Those responsible hadn't even made sure that the barrels were heavy enough to sink down into the muddy bottom," Lars Foyn said.

In Abrosimovo Bay itself the research ship managed to localise many barrels of waste with low and medium levels of radioactivity, three of the scuttled barges which carried liquid waste and had large receptacles on deck, as well as submarines and more of the dumped reactors - both with and without spent nuclear fuel. On the deck of one of the barges several large, cylindrical containers receptacles were found which are presumed to contain some of the reactors. The Russians have treated and sealed the reactors in a much more satisfactory way than the small containers.

#### **Sino-Japanese Conference Notes Energy Conservation Efforts**

*OW2510063194 Beijing XINHUA Domestic Service in Chinese 0914 GMT 24 Oct 94*

[By reporter Yu Changhong (0060 7022 3163)]

[FBIS Translated Text] Beijing, 24 Oct (XINHUA)—The measures China has taken to conserve energy have achieved remarkable success. The energy conservation projects launched during the Sixth and Seventh Five-Year Plan periods with over 27 billion yuan of government investments conserved energy equivalent to 55 million tonnes of standard coal per year; and while China's gross national product [GNP] grew by 11.7 percent during the 1990-1993 period, energy consumption during the same period grew only 3 percent. Energy conservation has played an important role in ensuring steady economic growth and in controlling the environment.

This reporter learned from today's industrial technology consultative meeting, sponsored by China's State Science and Technology Commission and Japan's Kyushu in Beijing, that the Chinese Government has drawn up many preferential tax, financial, and credit policies to encourage energy conservation. As a result of readjusting the industrial structure, product mix, the pattern of energy consumption, and business size, as well as replacing outdated and energy inefficient businesses with high-technology trades and products that yield high added values, the national economy has been proceeding along the course marked by intensive growth. Beginning in the eighties, energy conservation organs have been established in central and local economic departments, and the state has also promulgated the "Interim Regulations For Energy Conservation" and other regulations governing energy conservation. It has been reported that technical service centers for

energy conservation have been established in large and medium cities and major trades to provide technical services needed by units that consume energy. The China Energy Institute and other relevant departments have also made it an annual practice to sponsor an "energy conservation week" to help the public become more aware of energy conservation.

China is a major energy consuming country and energy conservation is a long-range strategic policy in China's economic development. While conserving energy, China attaches importance to learning foreign countries' advanced experiences and has carried out fruitful cooperation with international organizations—such as the UN Economic Development Agency and the World Bank—and relevant countries. In 1991, representatives from Kyushu's industrial and academic circles and the Japanese Government formed the Kyushu-China Industrial and Technological Consultative Committee, which has become an organ that conducts regular consultations with China's State Science and Technology Commission. The on-going meeting, which mainly discusses energy conservation and the comprehensive use of resources, is the fourth of such meetings that have been held alternately in China and Japan since 1991. Its aim is to promote extensive cooperation between the two countries' enterprises in the fields of energy management, efficient use of energy, energy conservation technology, and environmental protection. More than 80 Chinese and Japanese energy experts and representatives are attending this annual meeting, which is sponsored by the China Energy Institute this year.

#### **Beijing Said Trying To Bar Taipei From CITES Meeting**

*OW2810103394 Taipei CNA in English  
0817 GMT 28 Oct 94*

[By Debbie Kuo]

[FBIS Transcribed Text] Taipei, Oct. 28 (CNA)—Beijing is trying hard to bar a Taiwan group from taking part in a Convention on International Trade of Endangered Species (CITES) meeting scheduled to open Nov. 7 in Ft. Lauderdale, Florida.

The SWAN (the Society of Wildlife and Nature), a non-profit non-government group to promote wildlife and environmental conservation in Taiwan, is allowed by CITES to represent Taiwan to attend the CITES meeting as

a non-governmental organization (NGO), a SWAN spokesman said Friday [28 October].

According to CITES secretary-general Izgrev Topkov, Beijing has exerted pressure on the CITES Secretariat recently, opposing SWAN's presence at the meeting on the grounds that many SWAN members are officials from the Council of Agriculture (COA), the highest governmental agency in charge of wildlife conservation affairs in Taiwan.

Topkov said SWAN's participation in the CITES meeting may be undermined if Beijing mobilizes one-third or 40-odd CITES member nations to launch a boycott against the Taiwan group.

SWAN secretary-general Vincent Chen, formerly a neurobiological researcher with the Academia Sinica, said he feels sorry that an NGO group like SWAN could possibly be boycotted by CITES members if they yield to Beijing's political maneuverings.

Chen urged the Beijing authorities not to politicize wildlife conservation and environmental protection issues, in which both Mainland China and Taiwan are potential targets for international sanctions for their alleged violations.

Chen said SWAN delegates will attend the CITES meeting only to promote Taiwan's efforts and progress in wildlife protection and conservation and they will try not to stimulate Beijing with politically sensitive words.

He said SWAN plans to install a booth at the meeting, displaying pictures and posters to further introduce Taiwan's work on wildlife conservation.

Meanwhile, Ted Ting, executive director of the Beautiful Taiwan Foundation, another private wildlife protection group, said SWAN had no problems taking part in a number of CITES or UNEP (United Nations Environmental Protection) meetings in the past, during which mainland Chinese delegates had not expressed opposition.

Ting said that Beijing seems to have intensified its overall political blockade against Taiwan in the international community, even in wildlife conservation meetings.

SWAN was founded in 1982 by scholars, legislators, businessmen, students and nature lovers who share a keen concern for wildlife and the natural environment in Taiwan.

## REGIONAL AFFAIRS

## Roundup of Environmental Reports

AB2710123794

[FBIS Editorial Report] The following is a roundup of recent environmental reports monitored from media in FBIS Abidjan Bureau and EAU coverage areas from 12 September-20 October. Source information follows in parentheses after each item.

## Ghana

Accra DAILY GRAPHIC in English on 14 September reports that the Environmental Protection Council, EPC, has initiated a program "to control the influx of used refrigerators into the country." Under the program, which is expected to take off in October, importers of used refrigerators will be put under one body "to facilitate easy inspection and certification of imported used refrigerators." The EPC is also developing other fiscal policies "to check the use of ozone depleted substances, ODS." Meanwhile, the EPC has disclosed that "all functioning flexible foam manufacturers have converted to the use of methylene chloride" as a blowing agent "thereby contributing to the reduced consumption of ozone depleted substance." The EPC added that "the country is expected to achieve 50 percent reduction in ODS consumption by 1995."

## Nigeria

Lagos Radio Nigeria Network in English at 1500 GMT on 12 September reports that "the people of Nigeria, like the rest of mankind, have no doubt started to feel the effect of global warming which creates unusual climate changes and causes problems for the human environment. One of such problems is excessive rainfall resulting in heavy flooding. In the last few weeks, various parts of Nigeria have been having unusual levels of rainfall with concomitant flooding. The incidents have been particularly high in Kogi State."

Lagos NTA Television Network in English at 2000 GMT on 26 September reports that Alhaji Lateef Jakande, minister of works and housing, has announced the awarding of a multi-million-naira contract by the Federal Government "to check the oceanic surge on Victoria Island in Lagos." The minister said this after the national conference on housing in Jos, adding that works on the project will commence in two weeks' time, mainly as soon as the contract details have been finalized.

Kaduna Radio Nigeria in English at 0900 GMT on 17 October reports that "the people of Magira, in Kaduna-South Local Government Area, have reacted to the persistent industrial pollution in the area." Investigations reveal that "industries in the area have done nothing to salvage

the situation. A spokesman for the people, Alhaji Bello Ahmed Jango, appeals to the state government to intervene."

London BBC World Service in English at 1705 GMT on 20 October reports that for a long time, people in the oil states of the southeast have been complaining of the pollution being caused by the activities of the international oil companies. Orumpa Douglas, a Nigerian environmental activist said in London that there was a recent major Shell Oil explosion in the Cross River-Akwa Ibom axis, which has led to the complete removal of about five communities because their waters have been polluted: all their food is rotting away, and the people are dying. Douglas added that in another area, a major oil explosion by AGIP Oil Company has devastated the community, rendered water undrinkable, and brought about general misery in the area. He dismissed reports that the oil companies make the best possible effort to clean up and wonders why there are no oil spillages in the United Kingdom or America whereas in Nigeria such things occur almost every day. He added that exploration in the country's oil-producing areas "is causing enormous ecological damage to the communities, the people, and everything—all life that is there."

## SOUTH AFRICA

## Country To Ask CITES To Trade in Elephant, Rhino Products

MB1910171794 Johannesburg SABC TV 1 Network  
in English 1600 GMT 19 Oct 94

[FBIS Transcribed Text] South Africa is going to request the international community to ease its ban on international trade in elephant, rhino, and crocodile products. The request will be made in November at the Convention on International Trade in Endangered Species (CITES) to be held in the United States. Linda van Tilburg has more: [begin recording]

**Van Tilburg:** Five hundred and seventy are culled in the Kruger National Park each year. But since 1989, when the ban on the ivory trade came into effect, no ivory, meat, or skins could be exported. The cabinet has now decided that it will ask the world body to allow South Africa to trade internationally in elephants, rhino, and crocodile products, but said it would not include ivory or rhino horn.

**Environmental Affairs Minister Dawie de Villiers, in progress:** Therefore, acceptance of this proposal will allow South Africa to trade internationally in elephant products, such as hides, meat, and hair. In terms of this proposal, no international trade in South African ivory will be allowed.

**Van Tilburg:** South Africa's proposal, supported by most countries in southern Africa, has already been criticized in Europe, and it's said that it could jeopardize tourism to the country. [end recording]



### UN Envoy Yang Yanyi Speaks on Fighting Desertification

OW2610010994 Beijing XINHUA in English  
2140 GMT 25 Oct 94

[FBIS Transcribed Text] United Nations, October 25 (XINHUA)—Financial resources and technologies from the international community especially the developed countries are needed to check global desertification, Chinese representative Yang Yanyi said here today.

Speaking at a plenary meeting of the General Assembly on the convention on prevention of desertification, Yang said desertification has seriously affected all regions in the world and threatened the homeland and living resources of one fourth of the world population. In China, she said, almost half of the population are under such a threat and the nation loses 500 million U.S. Dollars annually from desertification.

Yang said that the convention concluded in June this year marks the first step of the international community in implementing agenda 21 adopted by the UN Conference on Environment and Development (Rio Conference) held in 1992. She said the Chinese Government is earnestly making all the necessary preparations for the implementation of the convention and participation in international cooperation in the related areas.

However, Yang noted that the rights and obligations defined by the convention are generally not balanced, mainly reflected by the fact that developed countries failed to undertake substantial commitments as to how to help developing countries fulfill convention obligations, and especially in terms of financial resources and financing mechanism.

Quoting statistics, she said the average per capita fund required for desertification prevention in the areas concerned should be 12 dollars, but the current actual per capita fund is only one dollar. "This serious shortage of fund is a dark cloud casting over the realization of convention objectives," she said.

She urged the international community, especially the developed countries, to fulfill their commitments made at the Rio conference and try their best to help developing countries and provide them with financial resources and technologies. "Only by so doing can the global desertification be genuinely checked in the interest of entire mankind," she said.

She announced that China, as a victim of desertification and a developing country, is willing to work with other members of the international community in a concerted effort for the final realization of the objectives set forth in the convention.

### Beijing Stresses Protection of Marine Environment

OW2610115794 Beijing XINHUA in English  
0942 GMT 26 Oct 94

[FBIS Transcribed Text] Changsha, October 26 (XINHUA)—China has developed a large oceanic environmental monitoring network over the past ten years, obtaining a large amount of data for further scientific research.

Composed of some 10,000 stations along the country's offshore areas, the National Marine Environmental Monitoring Network (NMEMN) has played an important role in the construction of the Daya Bay nuclear power station in Guangdong Province, Hong Kong's waste water discharge project and the harbor-dredging projects in east China's major cities of Shanghai, Lianyungang and Xiamen.

At present, the data provided by the network are widely used in oceanic exploitation, aquatic breeding, natural disaster prevention and reduction in the country's coastal provinces, according to a NMEMN working conference inaugurated today.

Last year saw China's marine industry hit a record output value of 90 billion yuan (10.5 billion U.S. dollars), and the figure is expected to reach 230 billion yuan by the year 2000.

The conference called for speeding up the construction of the network's information management system, and improving service efficiency.

A nationwide survey on oceanic environmental pollution will be carried out in the near future.

Furthermore, China is planning to cooperate with countries in Northeast Asia to serve marine exploitation in the Japan Sea, Bohai Sea and the northern part of the East Sea.

So far the network has more than 100 member institutions and some 3,000 employees across the country.

### Beijing To Start National Survey on Oceanic Pollution

OW2610120294 Beijing XINHUA in English  
0836 GMT 26 Oct 94

[FBIS Transcribed Text] Changsha, October 26 (XINHUA)—China is to carry out a large-scale survey on the scope of oceanic environmental pollution in the near future, which is the second one since 1974, when China conducted its first datum-line survey on oceanic pollution.

The survey aims to intensify the management of oceanic environment and coordinate the normal development of the country's coastal and oceanic economy.

Speaking at a working conference of the national marine environmental monitoring network, inspector from the State Oceanic Administration (SOA) Qin Derun said that China's marine environment is bearing ever-growing burdens as the country's coastal and marine economy is developing rapidly.

The results of the first datum-line survey conducted 20 years ago have played an important role in China's oceanic environmental protection. However, they cannot meet today's need, the inspector noted.

Qin revealed that the scheme of the coming survey has been approved by the State Science and Technology Commission and the work will be sponsored by the SOA.

**'Great Success' Seen in Protection of Endangered Species***HK2310011494 Beijing ZHONGGUO XINWEN SHE  
in English 0328 GMT 22 Oct 94*

[FBIS Transcribed Text] Beijing, October 22 (CNS)—China has achieved great success in helping protect and save endangered wild animals and plants, which have become an international issue drawing so much attention, and China has made its efforts in this sector for decades.

China is one of the countries in the world having the largest species of wild animals and plants. There are some 4,400 varieties of vertebrate alone in the country, making up more than one-tenth of the total in the world. The plants of higher grade are put at some 20,000, accounting for 12 percent of the total around the world.

There are to date 501 protective zones in forest and wild area for animals and plants, covering a gross area of some 50 million hectares. Rescue centres for endangered animals have been one after the other set up in Beijing, Kunming and Xian in which well organized rescue projects are carried out for endangered animals such as giant panda, Chinese alligator, David's deer, antelope and wild horses. Giant panda which is considered China's national treasure can be found in 13 protective zones with a total area of 50,000 sq. kilometres in Sichuan, Shaanxi and Gangsu provinces. There are to date 54 giant pandas born in the artificial breeding. About 400 cultivation bases for rare plants and 100 plantation parks across the country have been set up. All these facilities help protect and cultivate some 1,000 varieties of plants which are on the verge of extinction. Success has been made in artificial cultivation of several rare plants including metasequoia. A single piece of metasequoia was discovered in China at the beginning of this century. Cultivation of such rare plant, however, covers a wide area at present.

China is scheduled to establish about 100 protective zones within this century, by that time bringing some 60 million hectares the total area of protective zones across the country.

**Chinese Delegate Addresses Environment Forum in Bangkok***OW2410142694 Beijing XINHUA in English  
1253 GMT 24 Oct 94*

[FBIS Transcribed Text] Bangkok, October 24 (XINHUA)—A Chinese delegate today called on the international community to check the "harmful tendency of containing the development of the national economy and trade of the developing countries under the pretext of environmental protection."

Speaking at the second session of the Committee on Environment and Sustainable Development, which opened here today, the Chinese delegate, Zhong Shukong, said that after the conclusion of the Uruguay Round of multilateral trade negotiations, now there is a tendency towards imposing various unrealistic "standards" and requirements on industries and products of developing countries under the pretext of "environmental protection."

He said the "standards" and requirements are "likely to become new trade barriers" and "will impair the economic development of the developing countries, thus crippling their ability to participate in international cooperation on environment."

He said, "the international community must work together to check this harmful tendency in the spirit of equitable 'new partnership.'"

Meanwhile, Zhong called on developed countries to honor their commitment to offering 7 percent of their GNP as official development assistance to developing countries.

He said in 1992 this assistance was only 0.33 percent of their GNP, while in 1993, the figure dropped to 0.29 percent.

He said in implementing their comments on financial resources and technology transfer to promote global sustainable development, the developed countries are not only helping others, but also helping themselves, and are doing something in the long-term interests of the future generations of mankind.

He further said that developed countries, which produce 75 percent of the world's greenhouse gases, undoubtedly should make more tangible contribution to promoting global sustainable development and protecting the global environment.

Referring to China's efforts in environment and sustainable development, Zhong said that China had formulated its own "agenda 21," which would serve as a master plan to guide the nation's efforts in protecting the environment, promoting national economy, controlling population growth rate, and continuing to improve the quality of the people's livelihood beyond 2000.

**Beijing Government Holds Routine Work Conference***SK2510060894 Beijing BEIJING RIBAO in Chinese  
15 Oct 94 p 1*

[By reporter Ding Yatao (0002 0068 7290): "The Beijing Municipal Government Holds a Routine Work Conference"]

[FBIS Translated Text] This reporter learned from the 42nd municipal government routine work conference held on 14 October that the Shoudu Iron and Steel Company has never ignored environmental controls over pollution while developing its production. Next year, this company will invest 300 million yuan in controlling environmental pollution in the Shijingshan area.

Mayor Li Qiyang highly praised the Shoudu Iron and Steel Company for ridding the Shijingshan area of pollution. He said: The Shoudu Iron and Steel Company has done a real good deed. This company's production development stands in the forefront of reform, as does its environmental protection and its control over pollution. Li Qiyang pointed out: Environmental protection and control over pollution are great matters that benefit the people. We must firmly attend to them. It is necessary to develop the economy and improve the environment. All units and departments should ceaselessly upgrade the awareness of the capital's

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environment, enhance the sense of responsibility and sense of urgency for environmental protection, develop feasible plans, and make noticeable achievements every year.

The routine work conference of the municipal government discussed the municipal environmental protection bureau's report on the control of environmental pollution in the Shijingshan area. The major sources of the Shijingshan area's pollution include several enterprises such as the Shoudu Iron and Steel Company, the Shijingshan general power plant, and the Yanshan cement plant. These enterprises drain off waste water, waste gas, and waste material when developing production, thus polluting the environment of the Shijingshan area and creating air pollution. The air dust volume and total suspended particles constantly rank the Shijingshan area first in the municipality. To accelerate the pace of freeing the Shijingshan area from environmental pollution, the Shoudu Iron and Steel Company suggested the units mainly causing the pollution should be organized, and concerted efforts should be made to achieve control over pollution. Next year, the Shoudu Iron and Steel Company will invest 300 million yuan in controlling the pollution created by the dust from the lime kilns and pits on the backyard of the company and the pollution caused by the dust from tippers so as to change the control over pollution from main channels to supplementary channels. The Shijingshan General Power Plant and Yanshan Cement Plant pledged to positively undertake tasks for controlling pollution. The Shijingshan area also expressed its desire to positively and actively participate in controlling pollution.

The municipal government vigorously supports the suggestions made by the Shoudu Iron and Steel Company. The routine work conference maintained this project will accelerate control over pollution in the Shijingshan area to coordinately promote the development of the environment and the economy. The conference decided to establish a special leading group to take charge of improving the environment of the Shijingshan area and to appoint Zheng Yijun, assistant to the mayor and chairman of the municipal civil administrative committee, as head of the group.

Present at the conference were municipal leaders, including Zhang Baifa, Wang Baosen, He Luli, Li Runwu, Hu Zhaoguang, Wan Siquan, Zheng Yijun, and Zang Hongge.

### State Allocates Funds To Improve Air Quality in Yanan

HK2810113194 Xian SHAANXI RIBAO in Chinese  
19 Sep 94 p 1

[By Kang Long (1660 7893), Jian Ping (5324, 1627), and Ai Qingwei (5337 1987 0251): "The State to Allocate 30 Million Yuan to Curb Atmospheric Pollution in Yanan"]

[FBIS Translated Text] After personal instructions from State Council Premier Li Peng, the Ministry of Finance will allocate 30 million yuan to curb atmospheric pollution in Yanan City. At present, the first sum of 10 million yuan is already in position.

Yanan is one of 24 cities famous for their history and culture on the first list of such cities promulgated by the State Council of China. The city is also well known as a sacred place of revolution. Since the beginning of reform and opening up, Yanan's economy has developed rapidly, and the population of its urban area has grown drastically. In addition, because of its geographical conditions and backward heating methods, atmospheric pollution is very serious. After October each year, 64,000 small stoves and 174 boilers emit smoke and dust in Yanan, whose area is 8.8 square km. The annual amount of waste gases emitted is 5 billion cubic m and there are 14,000 tonnes of smoke particles. According to a public announcement on national environmental pollution in 1992, the total floating particle pollution in Yanan's atmosphere ranks first among the cities of China. Satellite measurement shows that there are three polluted cities in China which cannot be seen by satellite, and Yanan is one of them.

After finding out about the serious atmospheric pollution in the Yanan urban area during an inspection tour in 1993, Wang Bingqian, vice chairman of the National People's Congress, and Qu Geping, chairman of the Environment and Resources Protection Committee of the National People's Congress, expressed deep sympathy. Later, they sent a specialist group to carry out an investigation into environmental pollution in Yanan and to study and work out, together with Shaanxi Province, a relatively scientific and feasible plan for curbing the pollution. At the same time, they reported to State Councillor Song Jian and to the ministries and bureaus concerned and jointly wrote a letter to Premier Li Peng asking for funds for the work. On reading the letter, Premier Li Peng gave a written reply.

At present, the work to supply heat for several areas in a centralized manner has started in the Wangjiaping, Qilipu, Shichanggou, and two other sub-districts, and stoves which reduce smoke and dust are being recommended.

## REGIONAL AFFAIRS

**Editorial Hails Environmental Ties With Malaysia***BK2310115894 Jakarta SUARA PEMBARUAN  
in Indonesian 10 Oct 94 p 2*

[Editorial: "Indonesian-Malaysian Cooperation in Environmental Conservation"]

[FBIS Translated Text] After reading a report on Malaysia's call for global assistance with the forest fires in Indonesia, we could sense Malaysia's sympathy for us. Malaysia did not protest the thick smoke in the sky caused by the raging forest fires on several Indonesian islands, which had probably disturbed people in neighboring countries. Malaysia called for global aid to tackle the forest fires because pollution from such fires, in Indonesia or elsewhere, results in great losses to mankind.

It is interesting to note that the news was released after Tan Sri Haji Abdul Taib Mahmud, chief minister of Sarawak [East Malaysia] and Jamaludin Suryohadikusumo, Indonesian forestry minister, launched bilateral cooperation on environmental and wildlife conservation in Batang Ai, Kuching, Sarawak on 7 October. This event reminds us of the difficulties experienced by the two sides several years ago when an Indonesian timber concessionaire was believed to have encroached into an area belonging to the neighboring country. Perhaps this happened due to the absence of clear demarcation marks along the border, and probably the concessionaire had no authentic map showing the border lines. Another possibility was that the concessionaire intended to cut trees in an area larger than what had been awarded to him.

Indonesia and Malaysia have a common land border. Cooperation between the two countries, especially in conserving nature and wildlife, should always be based on the etiquette observed in their bilateral ties. This is because the flora and fauna in the jungles along their common border will never "understand" the geographical boundary between the two territories.

There was urgent need for cooperation because of threats from international organizations and other environmental groups.

The dilemma facing the whole world places developing countries such as Indonesia and Malaysia in a difficult position. On the one hand, the industrialized countries have flattered us by considering us to be owners of the tropical rain forests that are an international heritage. They say that the jungle flora and fauna are cause for hope and the "guarantee for continuity" of life. On the other hand, apart from cursing and accusing developing countries for destroying and losing the forests which they consider global property [preceding two words in English], many industrialized countries are still greedily importing tropical forest products and wildlife for use in scientific experiments.

There is a good sign now, however. While the rest of the world is pointing its collective finger at us, charging us with damage to the environment, we have learned a lesson. The reality is that it would be advantageous if the developing countries could cooperate and think of the best way to serve our interests, because we are the countries that own

the natural resources and wildlife. This is important for the continuity of all mankind. We have to realize that we have strong bargaining power [preceding two words in English] in confronting the accusation of developing countries that consider our environmental management improper.

We have also realized that all past and present efforts to conserve the environment are not only important for all mankind, but to Indonesia and Malaysia for the sake of continuity as nations.

## JAPAN

**Tokyo Supports Proposal on Easing Endangered Species Trade***OW2410095994 Tokyo KYODO in English  
0813 GMT 24 Oct 94*

[FBES Transcribed Text] Tokyo, Oct. 24 KYODO—The Japanese Government is planning to back proposals which would set numerical targets to replace an outright ban on trade in certain species of endangered animals, government sources said Monday [24 October].

The proposals are to be put to the Nov. 7-18 conference of parties to the Convention on International Trade in Endangered Species of wild fauna and flora (CITES) in Fort Lauderdale, Florida, by the organizers of the gathering.

If passed, they will reopen limited trade of minke whale, African elephant and other animal species in which trade is now banned by the treaty.

Environmental protection groups and the U.S. Government have already voiced their opposition to the proposals.

The proposals, which were made at the end of the previous CITES conference in Kyoto, Japan, in 1992, would also specifically define endangered species as those with "populations of 5,000 or less" and inhabiting "an area of 10,000 square kilometers or less."

The proposals came about as a result of earlier criticism by member nations of the treaty that the current definition of endangered species, which are simply defined as those in which possible extinction is foreseeable, is too vague.

The government views the proposals as "scientific" and says "it would be possible for the treaty provisions to be executed rationally," government sources said.

The government will hold a meeting which will draw together top-level officials from related ministries and agencies, and formally announce its agreement to the proposals in early November.

The CITES agreement, also known as the Washington Treaty, was enacted in 1973 in an attempt to prevent the extinction of endangered wildlife caused by poaching or illegal trade. Currently, 124 nations are members of the treaty.

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### MITI To Propose Energy Cooperation Program to APEC Forum

OW2610140794 Tokyo ASAHI SHIMBUN in Japanese  
23 Oct 94 Morning Edition p 3

[FBIS Translated Text] The Agency of Natural Resources and Energy [ANRE] under the Ministry of International Trade and Industry [MITI] will work out an energy cooperation program to deal with the rapidly increasing demand for energy and various environmental problems resulting from such demand in the Asian-Pacific region. The program's major parts will include such plans as exchanges of and joint international research on technology for preventing environmental pollution as well as joint efforts to work out estimates of regional demand and supply. ANRE plans to submit this program as a proposal to the Asian Pacific Economic Cooperation (APEC) forum scheduled for mid-November in Indonesia. The Agency also plans to work out a concrete program at the APEC conference scheduled for 1995.

The agency will ask the International Energy Issues Panel of the Comprehensive Study of Energy Council (an advisory council to the MITI minister) to study the program's details. The panel will review problems connected with different energy sources, such as oil and coal, and the current situation connected with environmental problems and study how to improve the information network on demand for and supply of various energies in the region, to promote international research work, and to coordinate concerned policies. In addition, it will tentatively prepare an "international version" of its energy demand and supply estimate—which has served as a basis for Japan's energy policy—so as to persuade other nations to have an understanding of common problems.

According to an International Energy Agency (IEA) estimate, the demand for energy in East Asia will increase at an annual average rate of 3.5 percent by 2000, exceeding the world's annual average rate of 2.1 percent by a large margin. It is estimated that an increase in the number of nuclear and hydraulic power plants will fail to supply sufficient electricity to meet the increasing demand. On the contrary, it is estimated that use of oil and coal will increase.

The Asian-Pacific region will certainly become an area that consumes a great deal of energy. In this regard, ANRE is concerned that problems connected with the discharge of carbon dioxide, nitrogen oxides, and sulfur oxides caused by energy consumption will constitute a serious international issue. This program maintains that international cooperation will be needed to work out measures to prevent environmental pollution and to develop energy-saving technology.

### International Environment Conference Opens in Tokyo

OW2410014694 Tokyo KYODO in English  
0116 GMT 24 Oct 94

[FBIS Transcribed Text] Tokyo, Oct. 24 KYODO—An international conference on global environmental issues preceding a special UN General Assembly in 1997 on the

environment got under way Monday [24 October] with some 30 specialists and eminent persons from overseas taking part.

The three-day conference at the Tokyo Prince Hotel is scheduled to consider a number of issues, including the impact of population on the environment, citizen-level cooperation in environmental protection, trade and the environment, and funding mechanisms.

The conference is being backed by Former Japanese Prime Ministers, Toshiki Kaifu and Noboru Takeshita, as well as Gaishi Hiraiwa, the former chairman of the Federation of Economic Organizations (Keidanren). It is designed as a follow-up to the eminent persons' meeting on financing global environment and development which was held in Tokyo in April 1992, two months before the UN-sponsored earth summit in Rio de Janeiro, Brazil. Maurice Strong, a Canadian who served as secretary general of the earth summit, is presiding over the conference.

The relationship between free trade and the global environment in the wake of the 1986-93 Uruguay round of trade negotiations and the impact of the world's population on the environment will be the main topics on the agenda, said conference organizers. A conference declaration is scheduled to be released Wednesday.

### Tokyo International Environment Forum Concludes

OW2610135694 Tokyo KYODO in English  
1240 GMT 26 Oct 94

[FBIS Transcribed Text] Tokyo, Oct. 26 KYODO—An international conference in Tokyo on the global environment wound up three days of discussions Wednesday [26 October] with a declaration proposing measures to finance environmental protection.

The declaration also urged Japan to take the leadership in promoting the networking of governments and nongovernmental organizations (NGOs) to protect the environment and sponsor a "global partnership summit" before a special UN General Assembly on the environment is held in 1997.

The world should take drastic measures to finance environmental protection in developing countries, the declaration said.

Such measures may include a system carried out in parts of the United States whereby companies trade the right to emit polluting substances, as well as the imposition of fees on users of forests, it said.

A halt to subsidizing those who consume fossil fuel or cut down forests would help the funding mechanisms, the document said.

Japanese Finance Minister Masayoshi Takemura told the forum Wednesday that he personally supports the idea that Japan should introduce an environmental tax.

The forum preceding the 1997 special UN General Assembly was designed as a follow-up to the eminent persons' meeting on financing the global environment and development, held in Tokyo in April 1992, two months before the UN-sponsored Earth Summit in Rio de Janeiro, Brazil.



The meeting, with some 30 experts from overseas taking part, was backed by former Japanese Prime Ministers Toshiki Kaifu and Noboru Takeshita, as well as Gaishi Hiraiwa, former chairman of the Federation of Economic Organizations (Keidanren).

## MALAYSIA

### Sea, River Pollution Reaches 'Alarming Level'

BK2410060794 Kuala Lumpur BERITA HARIAN in Malay 16 Oct 94 p 2

[FBIS Translated Text] Kuala Lumpur—Nationwide sea and river pollution has reached an alarming level due to the discharging of oil waste. This was stated by Datuk Dr. Abu Bakar Jaafar, director general of the Department of the Environment.

According to him, the department's environmental control program indicators recorded a high level of sea and river pollution caused mainly by grease and oil, suspended solid particles, and e-coli bacteria found on human excrement.

"The Department of the Environment indicators found that the nation's sea and river water had been polluted with suspended solid particles, ammonia, grease and oil, and e-coli bacteria.

The deterioration rates have ranged from one to 34 percent due to animal and human excrement, grease and oil from motor workshops, and soil dumping," he told reporters after launching Malaysian Environment Week 1994 here today.

Dr. Abu Bakar said however that the Department of the Environment expected the quality of sea and river water to further improve in the future following the privatization of the national sewerage system, which will lead to the perfect management of excrement.

He said that, as a whole, the quality of the environment nationwide has improved over the past 18 years due to the people's growing awareness and the strict enforcement of the rules on environmental control.

"Air pollution due to the emission of poisonous gases by motor vehicles and factories as well as open burning has showed a significant decrease.

"According to the Department of the Environment's indicators, the amount of sulphur dioxide has decreased by 31 percent, nitrogen dioxide by 14 percent, dust and other solid particles by one percent, and lead by one percent," he said.

According to him, the latest developments are a good sign that the quality of the nation's environment will improve in the future.

## TAIWAN

### CITES Claim of Missing Rhino Horn Stockpiles Denied

OW1910152794 Taipei CNA in English 1345 GMT 19 Oct 94

[By Lilian Wu]

[FBIS Transcribed Text] Taipei, Oct. 19 (CNA)—A government official said Wednesday [19 October] that only 33 percent of the government's registered stockpile of rhino horns is missing, and not the 65 percent claimed by an official of the Convention on International Trade in Endangered Species, or CITES.

Lin Shiang-nung, vice chairman of the Council of Agriculture (COA), was responding to a letter sent to the beautiful Taiwan foundation by Murray Hoskin, the CITES Standing Committee chairman, about the high percentage of rhino horns missing from Taiwan's registered stockpiles of the banned product.

Ting Tien-quei, executive director of the foundation, earlier sent a letter to Hoskin, who visited Taiwan early this year, asking what actions Taiwan could take before the Nov. 7-18 CITES conference in Florida to avoid having sanctions meted out to it.

Hoskin suggested in the letter that if Taiwan wants to avoid sanctions, it would have to account for why its rhino horn stockpile was 1,735.5 kilograms in an earlier estimate but just 601.59 kilograms in August.

Lin said that when the stockpile was first registered in 1990, 1,470 kilograms of rhino horn were tallied, and that the total indeed had increased to 1,735 kilograms in a 1992 count, but that its latest tally showed a stockpile of 1,159.5 kilograms, and not the 601.59 kgs Hoskin claimed.

Lin said that the discrepancy was due in part to registration errors and consumption of the horns by the registered owners.

Lin said most CITES members have been satisfied with the improvement Taiwan had made in its conservation efforts, but that a few countries think Taiwan should speed the passage of an amendment to its wildlife conservation law.

But Ting said that he was not hopeful Taiwan could avoid sanctions because it has fallen short in passing the amendment and in cracking down on the illegal smuggling of endangered species products.

As the CITES Standing Committee will draw up the agenda of the November conference and one of the issues to be discussed will be whether to impose trade sanction on Taiwan, Mainland China, South Korea and Yemen for their alleged violations of global conservation pacts, Ting said the attitude of Hoskin and the other six members of the Standing Committee toward Taiwan's wildlife conservation efforts is crucial.

Meanwhile, a report completed Tuesday by the COA on the progress of Taiwan's wildlife conservation efforts, which will be sent to CITES, shows that Taiwan has not fully complied with CITES' requirements.

As the revised wildlife conservation law has still not passed the third reading in the Legislative Yuan, the COA could only say in the report that it will seek through all possible channels to urge the Legislative Yuan to speed the passage of the revised law.

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## SLOVAKIA

### Anti-Gabcikovo Demonstration Takes 'Peaceful' Course

AU2510163294 Bratislava DENNIK in Slovak  
24 Oct 94 p 4

[TA SR report: "Bela Liptak on Julius Binder; Protest: 200 Demonstrators in Gabcikovo"]

[FBIS Translated Text] Gabcikovo—More than 200 people participated in a protest rally at the dam of the Gabcikovo hydroelectric power project on 22 October. The demonstration, held on the occasion of the second anniversary of the hydroelectric power project's putting into operation, was organized by the American-Hungarian Environmental Protection Fund and Bela Liptak, a U.S. citizen of Hungarian origin.

In his emotion-laden speech, Liptak focused mainly on Julius Binder, director of the Vodohospodarska Vystavba [Hydraulic Engineering Works] state enterprise, whom he described as "a person who, through his actions, has made Slovakia look ridiculous. With the construction of the Gabcikovo hydroelectric power project, he set two nations against one another to be able to steal millions for himself, because he never in his life loved the Slovak nation."

Concurrently with Bela Liptak's demonstration, several dozen members of the Slovak Green Alternative and the Hungarian Club of Real Greens staged a counterdemonstration. Its participants expressed disagreement with Bela Liptak's actions by means of banners reading "Liptak go home," and "Slovak and Hungarian Greens support the completion of Gabcikovo and Nagymaros."

Except for some heated verbal clashes, the demonstration took a peaceful course, also thanks to organizational provisions by the Slovak Republic Police Corps.

[Bratislava NARODNA OBRODA in Slovak on 24 October on page 2 carries a 150-word TA SR report on a statement made by Vojtech Bugar, chairman of the Hungarian Christian Democratic Movement, in reaction to the 22 October demonstration. In Bugar's opinion, the issue of the Gabcikovo dam's environmental impact must be assessed "realistically" because "it is very difficult to expect that a project that cost several billion korunas to build would be easy to tear down." Bugar believes that attention should now center on the fulfillment of promises made by politicians to the population living in the immediate vicinity of the project and that "the financial means and, above all, human energy invested in organizing this demonstration could have been used much more usefully and effectively for the benefit of Hungary and Slovakia."]



## BOLIVIA

Environmental Hazards to Amazon Region  
Outlined

## Bishops' Document

95WN0010A La Paz PRESENCIA in Spanish  
23 Sep 94 p 2

## [Editorial]

[FBIS Translated Text] Bishops of Bolivia and Brazil, meeting recently in Rio Branco, have issued a document exposing the indiscriminate tree felling and land clearing that is occurring in the Amazon Region. This is a reality that is being repeated throughout the length and breadth of that region, considered one of the earth's lungs, which cannot be ignored without damaging the ecosystems in this part of the continent.

The smoke noticed in cities such as La Paz, Cochabamba, and others in the East proves that land clearing is a serious problem. The information from the prelates reveals that, last August, a satellite recorded no fewer than 68,983 fires in the Amazon Region (State of Sao Paulo). Moreover, on a single day during September, in Rio Branco, 200 children entered health stations with lung problems caused by the atmospheric pollution created by the fires. This type of misfortune is being confronted in our country also, as evidenced, for example, by the complaints made by residents of Yacuibá.

Deforestation to prepare farming land, achieved mostly by clearing, as well as forest concessions, and erosion problems, are unquestionably the worst enemies of the forests. Paradoxically, however, the ecological imbalance is occurring simultaneously with the impoverishment of those regions' inhabitants, not limited to the Indians and rubber tree tappers alone.

The problem occupying our attention has evoked the concern of various authorities and institutions. A study by the Environmental Protection League warns that, if the situation is not controlled, Bolivia will lose about 33.4 million wooded hectares by the year 2000. The National Forest Chamber itself, and the Forest Development Center, admit that, owing to the exploitation of wood, "every year 2,000 square km of natural woods are taken over or lost." This is compounded by the annual disappearance of another 2,000 square km due to land clearing.

Further terrifying testimony comes from the expert Andres Visinoni, who suggests that Bolivia is losing between 4,000 and 7,000 square km of natural woods annually. He adds that, if all the categories of woods are taken into account, the losses range between 6,000 and 9,000 square km per year, "leaving the tropical forest between 61 and 91 years of survival." Other studies estimate smaller losses, and give our forest over 250 years of survival (with annual losses of 2,000 square km). Nevertheless, it would be advisable for the Ministry of Sustainable Development to establish a rational management of those resources, that would seriously concern itself with putting the reforestation programs into practice.

The problem, which cannot be ignored, demands an improvement in the regulations associated with forest exploitation, and the initiation of a campaign to heighten awareness before the land clearing season, in conjunction with Brazil and other nations with which we share the Amazon jungle.

The solutions will not be easy, considering the fact that, combined with this problem, we must also confront that of poverty, one of the solutions to which involves the preparation of new areas for agricultural exploitation. In view of situations such as this, there is a greater challenge to achieve sustainable development and rational use of the resources given to us by nature as an inalienable legacy, one that belongs to the future generations as well.

## Pando Department

95WN0010B La Paz PRESENCIA in Spanish  
23 Sep 94 p 2

## [Commentary by Oswaldo Brasilino Zalle]

[FBIS Translated Text] One of Bolivia's Amazon regions that still has 50 percent of its natural resources is Pando Department, after having withstood an irrational exploitation for over a century: first, of rubber; next, of rubber latex; later, of chestnuts; and finally, of gold and wood of various species. As for the fauna, it too has been irrationally exploited: starting with the tigers, and followed by the hide-producing species sold on world markets; then monkeys, birds of all types, and rare species; and ending with alligators and, finally, the water turtles in our rivers.

Thus far, the laws on forests, hunting, fishing, wildlife, national parks, ecological respite, and other government regulations issued on the subject have not had the effect of preserving the environment or the natural resources.

It is only logical that humankind should be fed by the natural resources given to us by divine providence. To our knowledge and understanding, these agents should be used and applied based on scientific and technical methodologies, rather than predatory ones, as has been and still is occurring in the world nowadays.

Could we possibly be failing to stop and reflect on the crime that we are committing? If we destroy nature, on what will the future generations live?

Everyone talks about preserving the environment and ecology; there are many theoreticians and agitators. But few have considered the fact that, to attain this goal, it does not suffice to hold seminars, conferences, and congresses, or to issue laws and disseminate posters. Rather, the evil must be attacked with practical measures, heightening the society's awareness, and procuring sufficient economic resources to equip, provide technology for, and demand accountability from the agencies charged with controlling and conserving the environment and ecology.

The countries with economic potential clamoring for the oxygen and nature that they have destroyed are now appearing as defenders of the ecology, pressuring the countries of origin to assume responsibility for that defense, for their benefit. This conduct is unjust and inhuman.

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In the case of Pando, which could be described as an earthly paradise because of its marvelous nature, fifty percent of its natural resources have been devastated and, if suitable measures are not adopted, it will be a complete desert within a decade.

At the close of the twentieth century, we should be speaking a different language, but we have not changed our mentality as a country or as a region. We do not seem to have been grieved by the plundering that the foreign powers have committed in our territory, beginning with the minerals and ending with the rubber. The proceeds from the boom in these materials, strategic for the wars instigated by capitalist arrogance, have not been reinvested in the country and its producing regions. They went to fill the coffers of the great powers, leaving the mine pits to replace the minerals, and the desert to replace the flora and fauna.

Since hope does not die, we shall remain hopeful about tomorrow, which can come only if Bolivia changes its mentality.

#### **River Navigation 'Paralyzed'**

95WN0010C La Paz PRESENCIA in Spanish  
23 Sep 94 p 1

[FBIS Translated Text] Trinidad—According to an official report from the National Meteorology and Hydrology Service (SENAMHI), river navigation in the Amazon Basin has been virtually paralyzed for nearly a month, because of the extremely low level of the region's rivers.

This very day (yesterday), Wednesday, with a reading of only 18 cm for the level of the Ichilo River (in Puerto Villarroel), the SENAMHI gave notice that it had recorded the lowest index in the last 12 years, less than the last record (of 33 cm) reported during September 1989. With that level, the average useful depth for vessels was 62 cm which, in fact, is useless for boats.

This was the technical response to the worry generated here by the shortage of fuel, which is regularly transported on the river route from the Cochabamba refineries. Furthermore, much of the heavy cargo to and from the towns in the northern part of the country, such as livestock, wood, and industrial products, is carried by way of the river.

The SENAMHI regional chief, Luis Phillips, showed PRESENCIA a chart plotting the constantly declining trend of the water level in the principal ports of the largest national watershed. In the nearby port of Almacen, today (yesterday), the lowest record reading in the past few years was taken, with only 18 cm. This offers a useful depth of 1.37 mts.

With an even more graphic comment, "the river is extremely dry," referring to the Beni River (between Beni and La Paz), the technician claimed that the low level at the Ichilo-Mamore center line began to occur in mid-August, when vessels could no longer make full use of the section between Puerto Villarroel and Puerto Varador (Trinidad). "The same thing occurred starting on 30 August in the section between Puerto Varador and Guayaramerin, lasting until now, when we have the lowest

levels ever recorded" by the SENAMHI and the Amazon Navigation Improvement Service (SEMENA).

In Phillips' view, the drought that is occurring almost nationwide is associated with the cycle that has been operating since the great floods in the eastern part of the country, such as those in 1992 and 1993.

He remarked: "Based on statistics, a major flood is followed by a major drought, at a 50-year interval. This was perceived between 1947 and 1992. Although we do not have exact data on the water levels, it coincides with what happened in 1947, when there was a major drought due to the meager precipitation and lack of water in the rivers."

Nevertheless, he added, the phenomenon also is caused by the widespread burning of pastures in the Beni pampas, causing the heat in the form of hot gases to raise the clouds "to such a height that they cannot concentrate to cause rainfall, because of the air currents. And the next problem is that the rain to come will wash the acids from the pampas, carrying them to the rivers and causing a high death rate among fish life."

He claimed that vessels with a draft exceeding one meter are immobilized in the ports. Phillips explained: "With the average depth recorded, the only ones that can circulate are canoes and small flatboats" (non-commercial small craft).

Giving a hopeful message, the head of the local meteorological station announced a southern front with a certain level of precipitation, which could reduce the general drought and also feed the Amazon watershed.

### **BRAZIL**

#### **Problems Encountered in Chemical Waste Disposal Examined**

PY2610005294 Sao Paulo AGENCIA ESTADO  
in Portuguese 2010 GMT 24 Oct 94

[Report by Jose Rodrigues]

[FBIS Translated Text] Santos, Sao Paulo, 24 Oct (AE)—Although 234,000 tonnes of toxic waste are produced every year in greater Sao Paulo alone, Brazil still does not have laws and rules for the final disposal of dangerous industrial waste. This problem is being discussed during the First International Congress on Final Disposal of Chemical Waste, which began today in Santos.

This issue worries the inhabitants of the Santos lowlands areas [Baixada Santista]. Herbert Passos Filho, president of the Baixada Santista Petrochemicals Union, said that the Rhodia plant has 12 huge sites for dumping toxic waste, which already amounts to 35,000 tonnes. He warned: "This problem, however, does not occur exclusively in Brazil." According to Passos Filho, there are still no laws for the final disposal of toxic waste. He added: "We must urgently establish rules and measures to dispose of this huge amount of waste, but also to prevent other similar problems in the future."

Herbert Passos Filho believes that companies specialized in solving these problems will soon begin appearing. He

said: "These companies will be the source of new jobs, and will solve this serious environmental problem." To put an end to these huge dumping sites the Brazilian Institute for the Environment (Ibama) has been drafting since 1988 a report on the situation, through the Environment Secretariats in each state. Leda Famer, Ibama's national coordinator for environmental protection, said that reports have already been written about Sao Paulo and Rio de Janeiro.

The report included 1,500 greater Sao Paulo companies out of a possible 26,000, and took four years to write. "The most difficult part of the work was obtaining information from the industries in order to make details of the situation better known," Famer said. In her opinion, the state reports will be used as a basis for a national policy on the final disposal of this toxic waste.

Ibama data indicate that from 300,000 to 400,000 tonnes of toxic waste are produced worldwide every year. Last year, Brazil imported 15,271 tonnes of lead and copper, but only 9,346 tonnes were processed. "Since 1991, Brazil can no longer import these substances from wealthy countries to dispose of. This year importing dangerous substances has become prohibited, even if it is for recycling," Leda Famer reported. Importing products such as shredded paper, plastic, and others, which are deemed not dangerous, could become liberated in December, when the committee that has been analyzing this problem reports on their conclusions.

## ECUADOR

### Population Increase, Foreign Species Endangering Galapagos

95WN0008A Quito HOY in Spanish 24 Sep 94 p 8A

[FBIS Translated Text] *The introduction of foreign animal and plant species is one of the issues that has never been successfully resolved.*

The species endemic to the Galapagos Islands are in a slow but inexorable process of extinction. The excessive land settlement, and agricultural and lumber industry development, are factors fostering this tragic situation that could prompt the United Nations World Patrimony Commission to declare the island zone a park in a state of extinction.

A study by Alfredo Carrasco, general secretary of the Charles Darwin Foundation, and geographers Cristophe Grenier and Jose Rodriguez Rojas, brings us in close view of the situation caused by human migrations to the Galapagos. The ecological habitats have suffered an irreparable impact for this reason.

According to the study, the agricultural-livestock and tourist industries, the growth of the populated centers, and the entry of species are jeopardizing the conservation of the archipelago's particular, scarce biodiversity.

As a direct or indirect result of human activities, a breed of turtles is on the brink of extinction, and at least three marine bird species are endangered. Of the 604 recognized species of endemic and native plants, 12 are extinct, and it is estimated that 229 are in the endangered category. Only

three of the six original endemic rat species survive. There are 18 species of endemic and native snails in danger, because of the destruction of micro-climates.

The potential risks being suffered by the national park have been worsened by the presence of a series of organisms that have been introduced. It is known that there are 321 species of foreign plants, at least 100 of which were introduced during the past decade. Owing to their germination capacity, many of the species introduced invade extensive sections of the national park with relative speed, competing with the native and endemic plants, which they displace.

Climate factors, such as El Nino, are potentially conducive to accelerating the germination and dispersion processes. However, the increased navigation through the entire archipelago is increasing the risk of further entries into the uninhabited islands, due particularly to the practice of dumping organic waste carrying seeds and fruit into the sea.

Moreover, the presence of mammals brought into the island region has put endemic and native species at risk. Despite this, more animals are continuing to be introduced, either voluntarily or involuntarily. A new species of rat was introduced during the past decade. The number of domestic animals, such as dogs and cats, has increased in residential areas, heightening the risk to the native animal communities inhabiting the nearby areas, or the populated zones. No complete inventory has been taken of the new invertebrate animal species that are rapidly invading the ecological niches of the species germane to the region, and there is evidence of the presence of ants, spiders, and Coleoptera.

If that were not enough, two wasp species have been introduced within the past four years. One of them, the "Polistes versicol," is located on all the populated islands, and on some visited by tourists. This extremely aggressive wasp displaces the "Xilocopa darwinii" carpenter bees, causing problems in the human community.

### A Coexistence Without Respect

*Fifty-five percent of the population thinks that the national park will have to surrender the conservation areas.*

According to the study, the high rate of population growth in the past 10 years, estimated at 8.5 percent annually, combined with the consecutive rise in the number of visitors, has caused an alarming increase in foreign species in the region.

It adds that this effect is associated with the need for importing food and goods from the continent to supply the resident as well as the tourist population, owing to the limited agricultural productivity.

"Added to the preceding is the lack of animal and plant quarantine controls in the continent's ports and airports, even though there are regulations calling for such controls."

"It should be stressed that 32 percent of the resident island population receives food from the continent. This food

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consists mainly of fresh green vegetables and fruit. Similarly, the vast majority of tourism companies is supplied with food from the continent to meet the visitors' needs," the report emphasizes. It also notes that the constantly growing construction industry demands dry commodities and lumber to meet its development requirements. This situation forces an increase in the extraction of the region's natural resources. Also, in view of the shortages in the vicinity of the populated centers, access routes are being constructed in areas of the park so as to extract these components more easily. This situation has worsened during the past 10 years.

The study claims that beach sand is being used for buildings, and that the sand near the populated areas, much of which had provided a nesting site for marine turtles, has already disappeared.

Matazarno [a dogwood], a native wood greatly prized in the islands, has almost disappeared in the special use zones. Certain important geomorphological features of major landscape value have been drastically altered, owing to the requirements for material to be used for the foundations of roads to accommodate cars, airports, and dwellings.

Studies that have been made indicate that, in Galapagos, 48 percent of the population think that the authorities should not oppose the extraction of natural resources in

park areas. This percentage is higher in the zones and islands that do not benefit from tourism, for example: 58 percent in Puerto Baquerizo Moreno, and 63 percent of those inhabiting the upper part of San Cristobal Island; whereas in Isabela it is 80 percent and, in Floreana, 100 percent.

The studies stress: "The integrity of the park has been threatened by the pressure currently being exerted by minority groups to have parts of the protected area turned over for agricultural-livestock purposes."

In Puerto Ayora, an arts and crafts cooperative is requesting land for the construction of housing and an arts and crafts complex outside the urban radius. Added to this is the division into lots of the land in the populated centers bordering the park. This unquestionably spurs and promotes the expansion of such centers which, for lack of space, will press for the adjudication of park areas or, ultimately, invade them. This phenomenon is obviously exacerbated by the constant, steady population growth.

According to a study by ORSTOM made in 1994, 55 percent of the population thinks that the national park occupies too much space, and that land will have to be turned over to the residents. This proportion is higher in the agricultural zones: 60 percent in the upper part of Santa Cruz, 63 percent in the Cristobal agricultural sector, 80 percent in Isabela, and 100 percent in Floreana.



## REGIONAL AFFAIRS

**Multilateral Environment Meetings Open in Manama***JN2510134694 Manama WAKH in Arabic  
1040 GMT 25 Oct 94*

[FBIS Translated Excerpt] Manama, 25 Oct (WAKH)—Bahraini Health Minister Jawad Salim al-'Arid this morning opened the meetings of the multilateral environment working team formed by the Madrid Middle East peace conference in October 1991.

At the beginning of the meeting, the health minister gave the inaugural speech in the name of Bahrain. He welcomed the participants and expressed happiness for hosting such conferences. He expressed hope that such meetings would promote the march of a just and comprehensive peace in the Middle East.

Jawad al-'Arid said that since the recent conference in The Hague last April, the world has seen the fruits of the bilateral negotiations represented in the signing of the Gaza-Jericho agreement. The world will tomorrow witness yet another historic step on the path of peace, that is, the signing of a Jordanian-Israeli peace agreement. He said the present generations never expected such things to take place. He noted that the recent developments over the past six months have proved the strength of commitment to peace and of the hopes pinned on it.

He underlined the importance of protecting the environment and natural resources before it is too late. He said that this protection requires collective responsibility which should be shouldered by all parties.

The minister referred to the catastrophes that plagued previous generations and the damages inflicted on environment due to lack of interest in protecting it. He highlighted some important points that would help protect the environment such as scientific research, socio-economic development, and exchange of relevant information.

Concluding his speech, he expressed the Bahraini Government's appreciation for the Middle East peace cosponsors, the United States and Russia, who exerted strenuous efforts to achieve a comprehensive and just peace in the region. He also extended his thanks to the countries that hosted previous conferences in this domain, especially Japan, the Netherlands, and Egypt. [passage omitted]

Delegations from 45 states and international organizations are taking part in these meetings.

**Israel Urges Saudi Arabia To Join Red Sea Clean-Up Group***NC2510182394 Paris AFP in English  
1727 GMT 25 Oct 94*

[By Sulayman Numayr]

[FBIS Transcribed Text] Manama, Oct 25 (AFP)—Israel called on Saudi Arabia to join it, Egypt and Jordan in a planned clean-up of the Gulf of Aqaba in the Red Sea, as

a new session of multilateral talks on the environment opened here Tuesday [25 October].

"I invite my Saudi colleagues to join in with this plan to turn it into a global (development) project in the interests of the whole region," Israeli Environment Minister Yosi Sarid said.

Israel suggested the project to fight pollution in the Gulf of Aqaba in the north of the Red Sea, where the Jewish state, Jordan, Egypt and Saudi Arabia have coastlines.

The two-day session here is the seventh round of multilateral talks on the environment since they were launched at the Madrid peace conference in October 1991.

Delegates from around 20 countries are attending the talks including Israel, which has no diplomatic ties with Bahrain.

Sarid, who was the first Israeli minister to visit here, praised the "constructive" role played by Gulf Arab states in the peace process.

"This constructive role will ease understanding and cooperation between the parties engaged in peace talks in the Middle East," he said.

The six Gulf Cooperation Council states—Bahrain, Saudi Arabia, Kuwait, Oman, Qatar and the United Arab Emirates—recently lifted a boycott of companies doing business with Israel.

Oman and Qatar hosted multilateral talks on water and arms control in April and May.

Opening Tuesday's meeting, Bahraini Health Minister Jawad Salim al-'Urayyid called for close cooperation between countries in the region, saying "there are no borders" where environmental issues are concerned.

Sarid earlier held talks with Bahraini Foreign Minister Sheikh Muhammad Bin-Mubarak Al Khalifah which he later described as "a good beginning for (future) contacts" between the two countries.

But Sarid quoted Sheikh Muhammad as saying "the issue of establishing relations between Bahrain and Israel, of whatever kind, depends on the time needed to resolve the problems concerned with the peace process" in the Middle East.

**Arab Reservations Noted on Israeli Proposals for Projects***NC2510223694 Paris AFP in English  
2156 GMT 25 Oct 94*

[FBIS Transcribed Text] Manama, Oct 25 (AFP) - Arab delegates to multilateral talks on the environment here have expressed reservations over Israeli proposals for joint projects in the region, delegates said.

An Israeli proposal to call a summit meeting between Middle East leaders to discuss the fight against desertification was met with "Arab reservations," said Jordanian delegate Zuhayr al-Mahasnah.

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The Saudi delegation here refused to comment on an appeal from Israeli Environment Minister Yosi Sarid for the kingdom to join in a planned clean-up of the Gulf of Aqaba in the Red Sea.

Sarid invited Saudi Arabia to join it, Egypt and Jordan in the fight against pollution in the Gulf of Aqaba, where all four countries have coastlines.

The head of the Saudi delegation, Muwaffaq al-Dalqan, refused to meet with Sarid as requested by the Israeli delegation, Israeli sources said.

"I have no orders from my government to meet the Israeli delegation," al-Dalqan was quoted as saying.

Riyadh believes that regional projects including Israel "would not lead to a just and comprehensive peace settlement" between Arabs and Israelis, a Saudi delegate said.

Sarid, the first Israeli minister to visit Bahrain, cut short his visit to Manama on Tuesday to take part in the signing ceremony of the Israel-Jordan peace treaty on the two countries' border on Wednesday.

Only four experts remain here to represent Israel in Wednesday's session of talks on environmental issues.

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## BAHRAIN

### Foreign Minister Confers With Environmental Team

JN2410201394 Manama WAKH in Arabic  
1320 GMT 24 Oct 94

[FBIS Translated Text] Manama, 24 Oct (WAKH)—Bahraini Foreign Minister Shaykh Muhammad Bin-Mubarak Al Khalifah met in Manama this morning with members of the head office of the environment work team to the Middle East multilateral peace negotiations. The peace cosponsors—the United States and the Russian Federation—as well as the European Union, Japan, and the European Commission are represented in the team.

The meeting dealt with the issues that will be discussed by the working team, which will start its meeting in Manama tomorrow. These issues include the Middle East environmental record, combating desertification, and the impact of radioactive materials on environment.

## RUSSIA

## Komi Republic Oil Spill

NEW YORK TIMES Report on Pipeline Accident  
Seen Exaggerated

*MK2610103094 Moscow SEGODNYA in Russian  
26 Oct 94 p 1*

[Report by Igor Galichin under the "Ecology" rubric: "Oil From Damaged Pipeline Threatens Pechora. This Report Came From New York"]

[FBIS Translated Excerpt] Representatives of the U.S. Department of Energy are discussing with their Russian counterparts the possibility of American experts' participating in eliminating the effects of a large oil spill from a pipeline in the Republic of Komi, THE NEW YORK TIMES has reported. [passage omitted]

SEGODNYA has asked the Ministry for Emergency Situations [MES] to comment on this report. According to the MES Control Center, a pipeline accident in the Republic of Komi did take place, but... on 1 October of this year. Moreover, the scale of the accident was not quite in line with the data reported by THE NEW YORK TIMES. The oil pipeline, with a diameter of 720 mm, had been leaking for a long time now, since last February. In a 42-km-long sector, lots of blowholes have emerged from which oil poured onto the ground. In order to stop it from spreading over the ground, oilmen girdled the spillage site with an earth dam. A heavy rainfall on the night of 1 October washed away the earth barrier, and oil burst through the dam. The spillage area was 68 square km large. Oil found its way into the small rivers of Ussa and Kolva (8 to 10 meters wide), which flow into the Pechora. The oil slick in backwater areas was 10 centimeters thick. The civil defense staff of the Republic of Komi reported that following rescue work, there is no real threat to the Pechora. What puts one on the alert, however, is that various sources give different estimates of the quantity of oil spilled onto the ground. For instance, the Nature Preservation Ministry speaks about 60,000 tonnes, the MES says it is half that, while according to the Komineft concern only 14,000 tonnes were spilled. At any rate, all these numbers are far from the 2 million barrels (over 300,000 tonnes) reported by THE NEW YORK TIMES. [passage omitted]

MES specialists see the spill as a serious occurrence but they are far from calling the Usinsk accident a global environmental disaster. Russian experts were surprised by the fact that this report was published in THE NEW YORK TIMES several weeks after the accident. To be on the safe side, however, a MES mission left for Usinsk last night to check the American newspaper's information on the ground and to assess for themselves the scale of the accident.

**Paper Refutes NEW YORK TIMES Reports on  
Komi Oil Spill**

*LD2610105794 Moscow ITAR-TASS in English  
1046 GMT 26 Oct 94*

[FBIS Transcribed Text] Moscow October 26 TASS—Russian newspapers comment on Wednesday on American press reports that a major ecological disaster took

place in the Komi Republic (member of the Russian federation) near the city of Usinsk.

It was caused by a rupture of an oil pipeline driven from the Vezey oilfield and a constituent part of the Komineft system. According to the NEW YORK TIMES newspaper, two million barrels or 300,000 tons of oil spilled.

The SEGODNYA (TODAY) newspaper which turned to the Ministry for Emergencies for information, reports in its issue on Wednesday that, according to the Ministry for Emergencies, indeed, a rupture of the oil pipeline took place in Komi on October 1. However, the scale of the oil spill does not fully conform to data published by the NEW YORK TIMES.

The newspaper writes that the 720-millimeter pipeline leaked in the area of Usinsk long ago, since February. There were many cracks at a stretch of 42 kilometers, from which oil spouted.

To prevent the spread of oil on the ground, oilmen surrounded the place with an earth dyke. An autumn shower washed away the dyke on the night of September 30, and oil rushed outside the dyke.

The area of the spill amounted to 68 square kilometers. Oil got into the small rivers Ussa and Kolva (width 8-10 meters) emptying into the Pechora. Thickness of oil film in river backwaters reached ten centimeters.

The headquarters of Komi Republic civil defence reported that there is no threat to the Pechora river as a result of measures taken by civil defence. However, analysts express apprehensions that various sources estimate differently the quantity of spilled oil.

The Ministry of Nature Protection quotes 60,000 tons. According to the Ministry for Emergencies, the figure stands 30,000, while the Komineft concern claimed that the spill amounts only to 14,000 tons.

In any case, all these data are far from the figure of two million barrels cited by the NEW YORK TIMES.

According to information from Mr. Nuikin, chief of the headquarters of Komi Republic civil defence, all cracks on the pipeline were repaired by October 18. Work to do away with the consequences of the disaster was suspended due to the advent of frost (down to minus 10 degrees centigrade) and snowfall.

"Specialists at the Emergencies Ministry regard the spill as a serious event, but they are in no way inclined to call the breakdown near Usinsk a global ecological disaster," the newspaper continues.

"Russian experts are surprised that the NEW YORK TIMES article appeared several weeks after the event. However, an expert group from the Emergencies Ministry flew to Usinsk last night on a fact-finding mission to check the American daily's information and to estimate the scale of the spill," the newspaper concludes.

In turn, the IZVESTIYA newspaper writes that "large fines are, no doubt, in store for the Komineft concern, the size of which will be increased due to its attempts to conceal the fact of an ecological disaster."

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"Komineft pledged to replace the faulty 52 kilometers by December 1, 1994 and to do away with all the consequences of the breakdown by April 1, 1995."

The newspaper stresses that "it is very disappointing for us that we paid attention to the disaster only after Americans raised a ballyhoo." The Ardalinskoye oil deposit is situated not far from Usinsk. It is being developed jointly with the Conoco company for the first time.

It was Americans that expressed alarm over the ecological situation in the region, and a proposal was received from U.S. Vice President Albert Gore to render ecological assistance.

Only following these developments, a government commission was set up, which flew to the area of Usinsk.

#### **Operations To Clean Up 1 October Oil Leak Continue**

*LD2510174394 Moscow ITAR-TASS World Service  
in Russian 1515 GMT 25 Oct 94*

[By ITAR-TASS correspondent]

[FBIS Translated Text] Moscow, 25 Oct—This evening a team of specialists from the Russian Ministry for Emergencies is flying to the site of oil pipeline accident near the town of Usinsk (the Republic of Komi). They are expected to map out the measures needed to complete the cleaning up of the area polluted by petroleum products, ITAR-TASS was told at the Ministry for Emergencies' press service.

The operations were interrupted on the 18 October by cold weather and snow.

On 1 October, near the town of Usinsk, heavy rains washed away a dam around the oil pipeline which had been damaged as long ago as February 1994. According to the information available to the Ministry for Emergencies' press service, about 30,000 tonnes of oil was spilled, spreading across an area of 68 sq. km. The oil got into the local Kolva and Ussa Rivers, but there are no settlements or water intake facilities on their banks; in Kolva creeks the film of oil was 10 cm deep. Both rivers are tributaries of the Pechora River. However, its basin has not been polluted, according to the results of a survey.

By 4 October the dam was restored, operations to bank up the Pechora were carried out, and concrete enclosures to receive oil were set up.

According to the Ministry for Emergencies, over 140 people and 40 units of equipment took part in eliminating the consequences of the accident. Over two and a half weeks of operations 1,134 cubic meters of oil-polluted ground and 10,018 cubic meters of oil-containing liquid were collected and removed.

#### **Komi Officials Say Oil Spill Exaggerated by Western Media**

*LD2510213394 Moscow Russian Television Network  
in Russian 2000 GMT 25 Oct 94*

[FBIS Translated Text] Over the last few days Western media has been carrying numerous reports on the oil

pipeline accident near the town of Usinsk in the Republic of Komi. Journalists and officials are speaking about a major oil spill and even about an ecological catastrophe. Olga Sergeyeva, our correspondent in Komi, maintains, however, that things are not so dramatic.

[Begin Sergeyeva recording]

**Sergeyeva:** The Republic of Komi is seriously concerned about the uproar in the Western press regarding the oil pipeline accident near Usinsk. The real picture is as follows. Early in October, after an accident on the oil pipeline linking the Vozey deposit with the main facilities in the town of Usinsk, 14,000 tonnes of petroleum products were discharged on the banks of the Kolva River, according to specialists from a local environment protection branch. Sections of the forest-tundra in the basin of the northern River of Ussa were polluted. Ecologists have rated the catastrophe on the second grade of accepted international norms, which implies damage to the environment amounting to several million dollars. Specialists have agreed unequivocally that the accident was a result of the federal authorities' policy toward the fuel and power engineering complex. This year there was no money to pay for the routine replacement of 45 km of oil pipeline which had reached the end of its service life of 20 years. At the same time, the confusion in the Western press about the names of Komi rivers allegedly polluted by oil and the ten-fold exaggeration of the extent of the actual discharge leads one to assume that Western financial and industrial circles would not mind trying to get Russia to pay fines for the secret dumping of waste by Scandinavian countries in northern seas. [end recording]

#### **Komineft Never Asked For Foreign Aid To Clear Oil Spill**

*LD2610125894 Moscow INTERFAX in English  
1146 GMT 26 Oct 94*

[FBIS Transcribed Text] The Komineft oil corporation has never asked for foreign aid in clearing the aftermath of the oil main breakdown in Northern Russia, according to a high-ranking spokesman for the Komi government.

Several Western publications reported that the leadership of the Komi republic had appealed to Western companies for help.

The spokesman admitted that Conoco Corp. (USA) had offered assistance in an ecological study of the oil spill area, but no forms of international financial or technical aid were in question.

The General Director of Komineft Valentin Leonidov assured the Komi government on Tuesday that the defects on the 52nd kilometer of the Vozey-Golovnye Sooruzhenia pipeline would be fully repaired by December 1, and the environmental consequences of the accident would be removed by April 1, 1995. The Federal Ministry for the Environment and Natural Resources claims that the breakdown resulted in the spill of 30,000 tonnes of an oil and water mixture. The corporation reports the loss of 14,000 tonnes of oil.

Komi government experts estimate the damage done by the environmental disaster at 60 billion rubles. Meanwhile, some sources claim that as much as 300,000 tonnes of oil spilled and the operation would require 350 billion rubles.

Since October 20 Komineft has organized daily aerial filming of the disaster area.

### **Commentator Views Attempts To 'Conceal' Komi Oil Spill**

*LD2610134994 Moscow Radio Rossii Network in Russian 1100 GMT 26 Oct 94*

[FBIS Translated Text] The foreign media, in particular the BBC and the respectable American newspaper NEW YORK TIMES are sounding the alarm, asserting that a big ecological disaster has happened in the Komi Republic in connection with the break in the oil pipeline there.

Our organizations, such as the Ministry of [Civil Defense], Emergencies [and Natural Disasters], the Ministry of Environmental Protection and Natural Resources [MinPriroda] and the KomiNeft company either remain silent or attempt to minimize the scale of the event.

What is the situation? Over to Nikolay Agayants:

**Agayants:** It has happened before in our society. It seems that today the Russian departments responsible for environmental measures are again much more worried not by the actual ecological situation in Komi but by their own image in the civilized world. This is the reason for the obvious differences in the figures for the amount of fuel that has poured out of the oil pipeline. For instance, MinPriroda asserts that it is 60,000 [metric] tonnes. According to the Ministry of Emergencies, it is 30,000 tonnes, while the people from the KomiNeft concern altogether believe that the spill amounts to only 14,000 tonnes, not the 300,000 tonnes that the NEW YORK TIMES reported.

By the way, only after an offer of ecological aid was made on behalf of Vice President Gore did our officials finally move, and on 25 October a state commission specially formed for this purpose left for the region of the disaster.

By no means do I exclude the possibility that foreign oil magnates and octopuses wish to gain access to the sources of our black gold and have chosen this disaster as a pretext for this purpose. But it is suspicious that KomiNeft attempted to conceal what had actually happened, and that in the actions of other services and departments one notices an Olympic calm.

Experts unanimously point to the ecological fragility of the tundra and the extreme danger of any pollution specifically in the northern region.

One would very much like to hope that the famous bourgeois media have again made a fool of themselves by exaggerating a trivial oil spill in Komi up to the size of an ecological disaster. But after Chernobyl one is nagged by doubts.

### **Local Officials Deny Pechora River Polluted**

*LD2610173694 Moscow ITAR-TASS World Service in Russian 1604 GMT 26 Oct 94*

[By Itar-Tass correspondent Viktor Makarov]

[FBIS Translated Text] Usinsk (Komi Republic), 26 Oct—Contrary to what the press is claiming, the accident outside Usinsk did not result in the pollution of the Pechora River, let alone the Barents Sea. Officials at the Komi Republic's headquarters for civil defense and emergencies made this statement to an ITAR-TASS correspondent today.

Sources at the headquarters believe that the scale and consequences of the accidents on the main oil pipeline in Usinskiy Rayon this August and September have been "greatly exaggerated" by a number of foreign and Russian mass media. The special commission that examined the territory polluted as a result of the accidents certifies that liquid containing oil did not go very far. It was explained at the headquarters that liquid containing oil drilled in the northern fields of the Komi Republic and the Nenetskiy Autonomous Okrug passes through the main oil pipeline to headworks located near the town of Usinsk. There it is purified of water, paraffin, salts, and other impurities and the oil obtained is prepared for transportation to consumers.

The 43-kilometer stretch of this oil pipeline between the Vozdeyskoye oilfield and the headworks has completed its recommended service life after 20 years of use, has greatly deteriorated, and needs to be replaced completely and immediately. Breaks and discharges of water containing oil into the environment have become more and more frequent on this stretch. In August and September there were several thousand breaks there at once. According to data from the registering units [uzly ucheta] these resulted in more than 14,000 tonnes of oil being spilled. It should be noted that oil workers, scientists, and nature protection officers are still arguing as to the quantity of oil spilled.

The breakages on the oil pipeline were patched up in September and the spilled oil-containing water got into bogs, lakes, and streams where it was blocked by temporary hydroseals. As a result of heavy rains at the end of September, the temporary hydroseals on the Palnikshor and Bezmyanny streams were destroyed and part of the oil got into the Kolva and Usa Rivers. The Kolva River was particularly badly polluted at the village of the same name, which has more than 400 inhabitants. According to eye-witnesses, the thickness of the film of oil-containing liquid reached 15 centimeters there.

Work to purify the riverside area near Kolva village has finished for today. More than seven kilometers of the banks have been cleaned up and more than 2,000 cubic meters of oil emulsions and soil have been taken away. It is planned to clear up the results of the accidents completely by the beginning of April in order to prevent oil-containing liquid being carried out along with spring floodwater into the rivers.

A special commission from the Emergencies Ministry of the Russian Federation arrived in the Komi Republic

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today. It intends to visit the sites of the accidents tomorrow and examine polluted territory in Usinsk rayon from a helicopter.

### **'Komineft' Tried To 'Cover Up' Two-Million-Barrel Oil Spill**

MM2510162094 Moscow IZVESTIYA in Russian  
26 Oct 94 p 1

[Report by Sergey Leskov: "Oil Spill Hits Russian Tundra, But the Americans Sound the Alarm"]

[FBIS Translated Text] It has become known that a major ecological disaster has taken place in Komi, not far from Usinsk, involving the rupture of an oil pipeline which runs from the Vezey deposit and enters the "Komineft" system. According to preliminary information, the quantity of oil spilled is estimated at 2 million barrels, or 300,000 tonnes. Experts find it hard to say whether there has ever been a bigger pipeline accident in the history of oil extraction.

The city of Usinsk is located 300 km from the Arctic Ocean coast and 50 km from Pechora [city], 100 km from the Arctic Circle. The landscape is typical of the Far North—lakes and impassable marshes. I visited this area quite recently, and I remember how the specialists, with one voice, noted the ecological vulnerability of the tundra and the extremely dangerous nature of any industrial pollution incidents in this specific region. Ecological problems, among other things, are exacerbated by the local population's dependence on their environment.

And so it proved. According to IZVESTIYA's information, the ecological disaster in the Pechora basin became known thanks to local fishermen who discovered traces of oil in their nets. The "Komineft" joint-stock company actually tried to cover up the accident. It is hard to believe that the rupture of the oil pipeline took place 17 August, yet it was not reported until 13 September. The oil was spilling onto the land until 6 September. As of now, the rivers Usa, Kolva, and Khatayakha are severely polluted. Even in the village of Ust-Usa, which is on the [river] Pechora, the oil slick is up to 5 meters wide. In the Kolva, the level of pollution is 20 times above the maximum permissible concentration.

The ecological disaster in the Pechora basin poses several questions. Why did "Komineft" eventually decide to inform local organs of the accident? According to certain reports, the oilmen, to avoid a scandal, tried to get smart and to pass off as the major accident a minor fault that occurred in September and was eliminated in a few hours. But all the same, it remains unclear: How come the numerous ecological services, which incorporate satellite monitoring of the routes of oil pipelines, failed to notice such a significant leak of petroleum products?

All the appearances suggest that "Komineft" was hoping that the oil would be filtered out in the numerous marshes. One marsh was dammed up, without the knowledge of the local oversight bodies. However, the rupture, it transpires, happened not in one place but several, and 52 km of pipeline need to be replaced. The huge scale of the leak—

which is eight times bigger than what was formerly considered the biggest accident, in the Exxon company's oil fields on the Alaska coast in 1989—made it impossible to hush up.

Without doubt, "Komineft" can expect substantial penalty fines, the severity of which will be increased because of the attempt to conceal the fact of the ecological disaster. "Komineft" pledges to replace the damaged 52 km by 1 December 1994 and to eliminate all the consequences of the accident by 1 April 1995. But the ecological monitoring bodies themselves cannot sleep peacefully when, as has become clear, it is not so very difficult to mislead them.

The fact that the disaster was only noticed after the Americans started shouting about it is also far from gratifying for us. Not far from Usinsk is the Ardalinskoye deposit, which is being developed for the first time jointly with the Conoco company. It was the Americans who sounded the alarm about the ecological state of the region, and an offer of ecological assistance was made in the name of U.S. Vice President Gore. Only after that was a government commission formed; it set off for the Usinsk region on 25 October.

The impression is created that what mainly concerns Russian departments responsible for nature conservation measures is not the actual ecological safety of our territories, but purely the reputation of these bureaucratic structures in the eyes of the civilized world. And once the rustle of greenbacks can be heard, even the idlest become active.

### **Conservationists Fear Effects Russian Oil Spill on Wildlife**

LD2610050794 London PRESS ASSOCIATION  
in English 0446 GMT 26 Oct 94

[By Brian Unwin, PA News]

[FBIS Transcribed Text] Some of Britain's most spectacular wintering wildfowl are under threat from the huge oil spill devastating Russia, it was feared today.

The birds are currently well away from the pollution-hit Arctic wilderness around the Pechora river and many have settled into winter quarters in Britain.

But they are due to return to their nesting territory during May and June next year and could face a lingering death unless a comprehensive clean-up is carried out in time.

The spill from a broken pipeline has reached two rivers and drenched tundra in Russia's Far North, but Russian officials have maintained it posed no serious environmental threat.

The size of the spill was unclear but United States Energy Department officials said it could range up to more than 80 million gallons or eight times the size of the 1989 Exxon Valdez disaster in Alaska.

Among the most significant birds of the Pechora region which migrate to Britain are Bewick's swans, with around 2,000 taking refuge at the Wildfowl and Wetlands Trust (WWT) centres at Slimbridge, Gloucestershire, Welney, Norfolk, and Martin Mere, Lancashire.

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Other UK visitors in potential danger include whooper swans, bean geese, European white-fronted geese, long-tailed ducks and velvet scoters along with a variety of wading birds and sea birds such as the pomarine and Arctic and long-tailed skuas which migrate south via British waters.

WWT spokeswoman Alison Byard said: "The Pechora delta is where we carry out the majority of our swan research work and we were absolutely aghast when we heard the news of this terrible oil spill.

"That region is very important to a huge range of wildlife. In the case of Buick's swans, there is one place where as many as 15,000 have been gathering to moult at the end of the breeding season.

"We are still waiting to find out more details about the oil spill but if it is as bad as initial reports suggest, it could be absolutely devastating with effects reaching far beyond the boundaries of Russia," she added.

"It is likely international conservation organisations will be getting together quickly to offer all possible help in the operation," she said.

#### **Emergencies Minister Shoygu Cited on Komi Oil Spill**

*MM2610211194 Moscow KOMSOMOLSKAYA PRAVDA in Russian 27 Oct 94 p 1*

[Report by Aleksandr Khokhlov under the general headline "We Found Out From Across the Ocean About the Environmental Disaster on a Russian River": "Report of the Ministry for Affairs of Civil Defense, Emergency Situations, and Elimination of Natural Disasters"]

[FBIS Translated Text] As we were informed by the Ministry for Affairs of Civil Defense, Emergency Situations, and the Elimination of Natural Disasters, a report about a breach in the pipeline near Usinsk was received by the ministry 4 October. Without delay, Sergey Shoygu, the minister for emergency situations, informed the government of this. At the same time, a report to the effect that the occurrence should not be considered an environmental disaster was issued from the scene of events.

There was a "fuss" in the Russian "upper echelons" the day before yesterday—following an article in an influential American newspaper. A commission of experts from the Ministry for Affairs of Civil Defense, Emergency Situations, and the Elimination of Natural Disasters, flew out to Usinsk yesterday to assess the situation on the spot. As it proved possible to establish, the preliminary data from the experts' work does not give grounds for speaking of a "terrible disaster" in the Russian north. Officials at the ministry are maintaining that somewhere in the region of 30,000 tonnes (THE NEW YORK TIMES said 300,000 tonnes), and not petroleum (as the Americans believe), but petroleum products, leaked from the pipeline under Usinsk.

In a confidential conversation, a high-ranking official from the Ministry for Affairs of Civil Defense, Emergency Situations, and the Elimination of Natural Disasters told our correspondent that the sensation stirred up in the

United States is primarily advantageous to the American companies which are now actively straining at the leash to develop the deposits in the north of Russia.

#### **Expert Says Komi Oil Leak Accident 'Not Unusual'**

*BR2710165194 Stockholm SVENSKA DAGBLADET in Swedish 27 Oct 94 p 7*

[Report by Jan Blomgren: "Unclear Picture of Oil Leak"]

[FBIS Translated Excerpt] Moscow—The local authorities tried yesterday to play down the effects of the oil spill near the Russian town of Usinsk 300 kilometers south of the Arctic Ocean.

There are also highly contradictory reports about how much oil has leaked out. Officials at the Environment Ministry in Moscow flew to the area yesterday to investigate how great the damage actually is. It was also revealed that the Komi-neft company which runs the pipeline had tried to conceal the leak.

A Russian expert confirmed to SVENSKA DAGBLADET that this type of accident is not unusual.

"It was no coincidence where the accident happened. On the other hand it was a coincidence that it came to the knowledge of the general public. If a U.S. newspaper had not raised the alarm the snow, which will arrive in a few weeks' time, would have covered up the problem," said Grigoriy Tertizkiy, who has worked at the Geographic Institute in Moscow for the last 15 years and who has traveled around the country studying environmental issues.

"Leaks in pipelines occur daily, but of course they are of different sizes. If as much as 300,000 tonnes of oil has leaked out in the present case—something for which I cannot vouch—I believe nevertheless that similar catastrophes have happened before. The difference is that hardly anyone got to know about them," Grigoriy Tertizkiy said.

For six years Tertizkiy himself has been traveling through northern Siberia and he speaks of leaks every year on the scale of 3 to 10 million tonnes of oil.

"But I am not sure that the oil is the major problem," he said. "You can always see the oil; things are more difficult after accidents involving gas." [passage omitted]

Grigoriy Tertizkiy spoke of several reasons for today's catastrophic situation.

The first is that the work 20 or 30 years ago was carried out badly. Where one Japanese inspector failed 80 percent of the welding work, the Russian inspector was only able to fail 5 percent. And it was this latter figure on which action was taken.

Another factor is today's shortage of money—something which has an effect on labor and other resources. Pipelines are located in great unpopulated tundras and have to be checked on by aircraft. There are helicopters, but not always the money for fuel. And suspended wage payments—sometimes lasting up to six months—also have a clear effect on workers' morale. [passage omitted]

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"There is a clear risk that leaked oil has already reached the Barents Sea. And what there is on the ground will accompany the snow into the rivers in the spring," said Grigoriy Tertizkiy who does not think that this accident will mean any changes for the better.

"Quite simply the resources are not there. And in addition we Russians do not have the same mentality and approach when it comes to the environment and the protection of nature as you in the West," he said. [passage omitted]

### **Russians Move To Counter Public Criticism Over Oil Spill**

MS2710133694 London THE TIMES in English  
27 Oct 94 p 14

[Report by Richard Beeston: "Russians Play Down Impact of Oil Disaster"]

[FBIS Transcribed Text] Moscow—Environmental officials arrived yesterday at the site of the big oil spill in northern Russia to determine how to clean up thousands of tonnes of crude oil spread over the fragile Arctic tundra.

In a move to counter public criticism of official incompetence the Russian authorities insisted that the situation near the town of Usinsk was under control.

"There are these fairy stories about a leak of 200,000 tonnes of oil. That is what oil workers there produce in a month. It is stupid," Nikolai Balin, the regional environmental chief, said. He estimated that the real figure was about 14,000 tonnes, adding: "The situation is under control."

Viktor Kostin, the Deputy Ecology Minister, who is heading a commission investigating the damage caused by the spillage, which began in February but was not admitted by the Russian authorities until earlier this month, said yesterday that teams from several Russian ministries were involved in the clean-up operation.

"The ecological situation in Komi after the accident on the oil pipeline is serious but not disastrous," he said, adding that there was no trace of oil pollution at the mouth of the main Pechora River where it feeds into the Arctic.

However, Moscow's attempts to play down the impact of the environmental disaster seemed likely to receive a hostile response from the Russian public. The country's press and new environmental lobby groups are livid that local authorities did little to prevent the disaster, called off the clean-up after a few days because of bad weather and are now apparently playing down the catastrophe.

"The situation there is very serious despite the reassurances we are hearing," Yelena Sukharensko, a local reporter who visited the scene, said. "The worst aspect is that the disaster could have been avoided if the Komi-Neft company had repaired its pipeline, instead of continuing to pump oil."

Valentina Semyashkina, head of the committee for the preservation of the Pechora River, accused the authorities of gross negligence. "Despite the fact that about 23 holes were discovered along the pipeline in August, Komi-Neft continued pumping oil as if nothing had happened," she

said. "Oil that leaked into the Pechora River could now pour into the Barents Sea. This has happened before."

The daily newspaper IZVESTIA said Russians were ashamed that they were told about the scale of the environmental damage only after the Americans publicised details of the accident.

### **Ministry Says West Willing To Help Eliminate Komi Oil Spill**

LD2710174394 Moscow INTERFAX in English  
1650 GMT 27 Oct 94

[FBIS Transcribed Text] A number of Western countries have said they are prepared to help Russia eliminate the effects of the oil pipe line disaster in the Komi Republic, a source in the Russian Nature Ministry has told the Petroleum Information Agency. However, it did not specify what governmental organizations were prepared to extend such assistance.

The source said that Moscow would make a reply only when the real scale of the accident and the likely costs of repair and rehabilitation work have been established.

So far there have been no confirmed reports as to how much oil leaked through the blow-holes from the oil pipe-line in the Ukhta district of the Komi Republic. Estimates vary from 30 thousand tonnes (Russian sources) to 100 thousand tonnes and more (Western sources).

The government of Komi estimates the damage from the ecological disaster at 60 billion rubles (about \$20 million). Meanwhile some Western experts estimate elimination costs at \$100 million and say that the Komi accident is the biggest since the crash of the Exxon Valdez oil tanker off Alaska in 1989.

The environmentalist organization Greenpeace recalls some statistics concerning accidents at oil industry facilities of the Pechora oil and gas fields, in the Northwest of Russia.

In a 1973 accident at an oil well oil covered the banks of the Kolva and Pechora rivers 500 kilometers long.

In 1980 through 1987 the Kumzha-9 oil well systematically polluted the Korovinskaya Bay (the Barents sea coast). As a result the concentration of oil products at the mouth of the Pechora river was as high as 45 tolerance limits, and in the Korovinskaya Bay 127 tolerance limits.

Greenpeace says that in August 1994 several thousand tonnes of oil leaked from a gas pipe-line in the area of the Khata Yakha river.

### **Greenpeace Says Komi Pipeline Leaking Since August**

BR2710162094 Copenhagen INFORMATION in Danish  
27 Oct 94 p 1

[Report by Igor Malakhov: "Russia Admits Attempt To Conceal Oil Leak"]

[FBIS Translated Excerpt] Moscow—The Russian Environment Ministry admitted yesterday that the ministry

together with the Komi-Neft oil company did try to conceal the oil leak in the autonomous Russian republic of Komi. [passage omitted]

The office of Greenpeace in Komi says that it is too early to estimate the environmental impact of the oil leak which happened in an area where the ecosystem is "incredibly fragile."

Greenpeace told INFORMATION that the oil leak occurred in a corroded oil pipeline near Usinsk in northern Komi. The pipeline had almost 200 leaks in a 42 kilometer section.

After the first leaks were discovered in August Komi-Neft continued to pump oil through the pipeline at the same time as it tried to dam in what had leaked by constructing a 7.5 meter high dam around the leaking pipeline.

At the time when leaks from the pipe were at their greatest Komi-Neft was losing up to 5,000 tonnes a day, Greenpeace said.

Finally on 1 October the dam collapsed after several days of heavy rain and oil began to flow toward the River Pechora, which flows into the Arctic Ocean.

#### **'Impurities' in Pipeline Caused Oil Spill**

LD2710152994 Moscow INTERFAX in English  
1510 GMT 27 Oct 94

[FBIS Transcribed Text] The oil slick in the vicinity of Usinsk, Komi Republic, was caused by the rupture of a pipeline through which the Komi-Neft oil company pumped crude containing a large amount of impurities which corroded the pipeline from inside. This opinion was voiced by a source close to the management of Transneft, a Russian oil transportation company.

He did not rule out the possibility of a repeat of the disaster in another Komi-Neft pipeline if the pumping of unpurified oil continued.

He dismissed as exaggerated Western reports that a total of over 300,000 tonnes of oil had leaked (14,000 to 60,000 tonnes by various Russian estimates). The experts argued that the Western press reports were profitable to Western companies pressing for the Northern Gate project.

Under the project an oil terminal on the Barents Sea coast and a pipeline leading to it from the Timan-Pechora oilfield would be constructed. Texaco, Exxon, Amoco and Conoco, the U.S., the Anglo-Dutch Shell, Norsk Hydro, Norway, and Neste, Finland, are working on it. The Russian participants of the project are the Arkhangelsk Region and Nenets Autonomous Area administrations and the Arkhangelskgeologiya and Rosshelf companies. If the project is carried out, the crude will not be pumped through the Transneft network.

#### **Ministry Recounts Background to Oil Spill**

LD2710153794 Moscow INTERFAX in English  
1509 GMT 27 Oct 94

[FBIS Transcribed Text] The Russian Environment and Mineral Resources Protection Ministry believes the rupture of an oil pipeline in the Komi Republic poses a real

ecological danger and will do everything to remedy the situation, a ministry press release made available to INTERFAX Thursday says.

According to the ministry, the leak was detected on August 23. Areas of size 300 by 400 meters were polluted and the oil layer ranged from three to 40 centimeters. Before September 14 a total of 14,033 tonnes of oil leaked.

Experts of the Komi Environment Protection Ministry took part in the investigation and planning the ways to deal with the effects of the disaster, in particular collection and utilization of oil and construction of four dams in small rivers.

Oil slicks one kilometer long were observed in the Kolva River at the end of September and early in October when the dams broke down after torrential rains. Three meter wide patches were observed on the banks of the Usa, a tributary of the Pechora.

Once the Russian Environment Protection Ministry heard from the Nenets Autonomous Area authorities that a total of 60,000 tonnes of oil had poured from the pipelines, a team of experts from the ministry and Water Supply, Weather and Fishery Committees and the Emergencies Ministry were sent there to estimate the scale of the disaster and sufficiency of the measures taken to deal with it.

The team reached Usinsk late on October 26.

According to the ministry, the oil pollution of the Pechora stayed within the maximum allowable concentration and only in the mouth of the Usa it was two to three times that concentration. There was no oil film.

The Komi government estimated the damage at 60 billion rubles, an equivalent of \$19.76 million.

This estimate is at variance with the data reported by certain western sources which describe the event as a major disaster, say that as much as 300,000 tonnes of oil escaped and that over \$100 million will be needed to deal with the effects of the leak.

Meanwhile, the Komi civil defense chief Anatoly Nuikin denied in an INTERFAX interview the reports of an ecological emergency around the town of Usinsk. He said that the effects of the leak had been dealt with and work was nearing completion.

Nuikin emphasized that no oil would reach the Pechora or the Barents Sea. He admitted, however, that repair activities could not start before the frosts set in and could not be completed before April 1, 1995.

#### **Komi Republic To Revise Cooperation Agreement With Gazprom**

MK2710142094 Moscow SEGODNYA in Russian  
27 Oct 94 p 3

[Report by Yevgeniy Kuznetsov report: "The Komi Authorities Intend To Revise the Agreement With Gazprom. The Republic's Parliament Is Unhappy With the Concern's 'Exclusive Privileges'"]

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[FBIS Translated Text] The agreement between the Komi Republic and RAO [Russian joint-stock company] Gazprom on economic cooperation, signed 8 June 1994, will apparently be revised, a confidential source in the apparatus of republic head Yuriy Spiridonov said.

Such a possibility is related to the need to ratify the document by the Komi parliament. Presumably, a radical change in a number of articles will be required for ratification. The agreement was signed on a day of festivities devoted to the inauguration of the republic's head, with Rem Vyakhirev, chairman of the Gazprom board of directors, arriving for the occasion. This circumstance, according to the source, explains the ease with republic head Yuriy Spiridonov signed a document granting Gazprom exclusive rights.

Thus, Article 3 grants Gazprom ownership rights over products extracted on Komi territory, whereas the republic's law on mineral resources proclaims them its exclusive property. Article 9 extends to Gazprom all tax and other breaks which are envisioned by the Komi laws for enterprises attracting foreign investors. The mechanisms of the republic's receiving any real share of profits thus obtained, however, are not specified. According to the source, Article 15 is going to lead to serious ecological consequences; it says: "The Komi Republic shall ensure the free movement across its territory of the transport, cargoes, and products of RAO Gazprom." According to the republic's state ecology committee, approximately 10 percent of its forests and tundra has been irreparably damaged by all-terrain vehicles, prospective boring, and other activity by the fuel and energy complex in Komi. Furthermore, ecologists recall that the development of the Bovanenkovo gas condensate deposits on Yamal, conducted by Gazprom, has been suspended owing to the "unprecedented harm caused to nature." Article 17 of the agreement exempts Gazprom from any responsibility for the social sphere because the RAO transfers all housing and social amenities from its balance sheet to the republic, whose financing from now on will have to be ensured by the Komi Republic on its own.

An adjusted text of the agreement with Gazprom is expected to be reviewed by the republic parliament as to the possibility of its ratification on 21 December. A source close to the Komi Republic's Constitutional Oversight Committee called into question the very possibility of ratification: According to it, the agreement concluded by a Federation component de facto imparts the character of a state/territorial entity to a common group of industrial enterprises, which is legal nonsense.

#### **Greenpeace Activist on Dangers of Komi Oil Spill**

BR2810155594 Stockholm DAGENS NYHETER  
in Swedish 28 Oct 94 p A16

[Report by Peter Sandberg: "Lifelong Battle Against the Oil"]

[FBIS Translated Text] Goteborg—According to Russian scientists, it will take a very long time before the Arctic landscape will recover. The oil could be gone in around 50

years' time, but then it would take another 50-100 years before trees and bushes reappear, Russian Greenpeace activist Dima Litvinov said.

Dima Litvinov has built up Greenpeace in Russia and has been working for a while with Greenpeace in Goteborg. The Russian oil industry with its negligence, its inadequate maintenance, its constant spills and leaks has been one of the organization's main targets.

The Komineft oil company is still claiming that the leak is in the region of 14,000 tonnes. The actual amount of liquid leaked from breached embankments around the pipeline is greater, but the oil content is "only" 14,000 tonnes, according to Komineft.

"But according to our sources and our calculations, there is documentary evidence of leaks totalling around 70,000 tonnes and there are eye witness accounts claiming that a further 130,000 tonnes have leaked out. This could turn out to be the third biggest leak ever, after the one that happened during the Gulf war and after the loss of the Ixtoc rig off Venezuela. But in terms of the environmental impact the Russian spill is probably the most serious," Dima Litvinov said.

The accident happened because the pipes have rusted to pieces and fractured. The rate at which pipes are replaced in the West is between 12 and 14 percent per year, while in Russia people think that they cannot afford to replace more than 2 to 4 percent of the pipeline system....

The current catastrophe has been developing since February and has involved a series of spills. On 27 August there was a major leak which polluted the River Pechora. The pipeline was not shut down for repairs until 6 September and was opened again a couple of weeks later despite the fact that several leaks remained.

To limit the leaks embankments were built around the pipeline and on 27 September these embankments ruptured.

On 11 October the matter was raised in the regional parliament and a prominent representative of Komineft who has a seat in parliament claimed that nothing had happened....

"Four rivers—the Pechora and its tributaries, the Kolva, Usa, and Hata-Yakha—have been affected. At the village of Ust Tsilma, 450 kilometers downstream, lumps of oil have been caught in the fishing nets, despite the fact that the company claims that the Pechora has not been polluted," Dima Litvinov said.

A few years ago he took part in an expedition to the Tyumen region which lies east of the Urals but in the same sort of country as the current spill.

What the expedition found was frightening.

"From the air we would see wetlands which were so polluted there were no pools of water reflecting the sky, but surfaces of pure oil between the tussocks and a film of oil floating on rivers and lakes. In the town of Surgut the drinking water was polluted by oil so that it stank and a film formed on the top of the water if you let a drinking glass stand for a short time," Dima Litvinov said.



"Energy Minister Danilov-Danilyan said a few years ago that the sum of all oil spills is equivalent to the total annual energy production from all of Russia's nuclear power stations," Dima Litvinov said.

The problem is that this is a region bordering on the tundra dominated by wetlands, bog moss, sparse vegetation, and thin stands of bushes and trees. There is permafrost in the ground and this means that all vegetation is completely dependent on the top layer of soil for its survival. If this is damaged animals and plants will die. Among the first things to die are trees and bushes which are already living on the edge of what they can tolerate when it comes to the climate and they have no buffer against any other form of stress.

"According to the scientists we have been in contact with, it takes 30 years before the bog moss returns and only then is it at all possible for trees and bushes to establish themselves. Before we set off for the Tyumen region we saw pictures from the construction period there 35 years ago. The tracks from bulldozers which we saw on 30-year-old aerial photographs are still there in nature," Dima Litvinov said.

Oil is one of the few sources of Russian export income and the Russian Government has also invited foreign oil companies to become involved. Russian oil is also sold at a subsidized price inside the country—which means that it can be difficult to achieve the income to cover maintenance and repairs. The parts often come from former Soviet republics which only accept hard currency, and Russia thinks that it can find a better use for this.

This means that the pressure to produce has increased dramatically, at the same time that the resources for maintenance—something that was always neglected—have decreased markedly.

#### ITAR-TASS Lists 'Major Accidents' in Usinsk Pipeline Area

LD2810104994 Moscow ITAR-TASS in English  
1021 GMT 28 Oct 94

[By ITAR-TASS]

[FBIS Transcribed Text] Moscow October 28 TASS—The "Kombineft" [Komi Oil] joint stock society intends to replace a 52-kilometer branch of an oil pipeline in the Usinsk region of the Komi Republic after it had been used for 20 years. This is one of the ways of resolving the problem of numerous accidents at the largest oil pipeline in northern industrial areas reported in recent years.

Next follows a list of major accidents reported in the area of the pipeline:

Spring 1986. A fire broke out at pump station "Kombineft" extracting oil from 68 oil wells. Damages estimated at 122,000 roubles.

March, 1988. A fire swept the Usinsk oil developing complex "Kombineft". A pipeline burst as a result of corrosion and 20,000 tons of oil leaked outside, contaminating the area of 2,000 square meters.

December, 1991. A strong fire breaks out at the Kharyagin oil deposit "Kombineft", destroying a new oil well built by the Usinsk construction enterprise. The fire was extinguished by fire brigades from Ukhta, Syktyvkar, Moscow, Izhevsk, Perm. The fire was finally put out by the artillery which destroyed the burning oil well.

April, 1992, an oil pipeline burst at the Kharyagin "Kombineft" oil deposit. 20,000 tons of oil leaks outside.

June, 1992. The Usinsk oil pipeline "Vozey" burst, causing damages estimated at 700 million roubles. Over 8,000 tons of oil spilt into the Pechora, Usa and Kolva rivers. The accident was caused by corrosion of the pipeline.

August, 1994. As a result of accidents at the Usinsk pipeline around 30,000 tons of oil was discharged to nearby areas. Numerous cracks in the pipeline which appeared in marshy areas on August 12, were spotted by "MiG" helicopters two weeks later. The damage was estimated at 62 billion roubles.

September, 1994. In view of a threat of another accident at the "Kombineft" oil pipeline the transportation of oil from the majority of northern oil and gas deposits was suspended.

October, 1994. An emergency situation declared on the territory of the Usinsk region following major accidents at the oil pipeline in August, 1994.

The Northern Meteorological Department reported that as of October 20, no oil spots were found in the area of the village of Ust-Tsilma near the Pechora River, while the concentration of oil products in the river is below the permissible level.

However, the Russian Ministry for Emergency Situations believes that reports about after-effects of the August accidents are inadequate to the real situation.

#### Radiation Pollution From Tomsk Plant

95WN0015A Moscow ROSSIYA in Russian No 40,  
19-25 Oct 94 [Signed to press 18 Oct 94] p 7

[Article by Galina Mashtakova under "Sore Point" rubric: "ZATO Under Number Seven"]

[FBIS Translated Text] "Mankind is doomed to technical progress. As long as his brain works, more and more new technologies will be created. And the more complex the technology is, the more potential harm it will bring for the health of the people. And whatever protective means are invented along with the technology, behind all of this is man with his head and his hands. After all, as Gennadiy Petrovich Khandorin, general director of the Siberian Chemical Combine (SCC), joked, "all accidents happen for one of two reasons: there is no contact where it should be or there is contact where it should not be."

Tomsk Oblast has been living in a state of emergency for several years now. The leadership of the SCC is frankly irritated by the ecological movement, in particular by "dilettantish" scientists. And naturally the scientists, who certainly earn unconditional respect on account of their professionalism and their interested and conscientious

attitude. respond to this leadership with mistrust and suspicion. There is no contact where it is needed!

ZATO stands for "closed administrative-territorial formation." They are invisible cities and towns that are test ranges and nuclear complexes.... These "new formations" appeared in the body of the country about 40 to 50 years ago. The offspring of the military-industrial complex, they initially inspired respectful fear because of their secrecy and obscurity: What are they doing there behind several rows of barbed wire? But this was only at the beginning. The "secret physicists" bathed in the rays of their own glory and importance for only a short time. With time they themselves and then the rest of the population of the former power realized what might be the fruits of domestic technical progress with a clear militaristic tone. The time of the hangover arrived...

...I came to Tomsk for the first time in 1986. The city seemed to me like a kind of "blockade Leningrad." Doubled over in a bitter blizzard, men dragged sleds with large milk cans and women pulled smaller cans and vessels. My local colleagues explained to me that the water from the Tom was undrinkable. To the extent possible, the people got water from springs but even they are unsafe here, in a region of cedar forests burned by acid rains. But at home, in their kitchens, they talked about another Tomsk under the number seven and hidden behind seven seals in the taiga.

It was 6 April 1993 when there was a "failure of a technological apparatus" at the radiochemical plant of the SCC at Tomsk-7. In this apparatus, they were carrying out an operation to prepare to extract a uranium solution. There was an explosion with destruction of part of the building and the discharge of radioactive aerosols to the environment. The radioactive trail extended to the northeast from the SCC and crossed the northern motorway 28 km from Tomsk. As of 6 April, the strength of the dose of gamma rays on the contaminated section of the road reached 400 microroentgen/hour. It was 120-150 after decontamination. On the international scale of nuclear events, the accident was rated as a "serious incident." Initially the discharge at Tomsk-7 was estimated at up to 500 curie, then at 41, and the last figure was 115. At Chernobyl (for comparison), it was 50 million curie.

Nevertheless, a panic arose. The mistrust and fear that had developed over the years did their work. The flight of foreigners provoked "bottlenecks" of compatriots at the airport and railroad. In Kemerovo Oblast, they confused microroentgens with milliroentgens and they confused the Chernaya Rechka, where the discharge went, with the stream Bolshaya Chernaya on the border of the oblasts. There was a great deal of haste and precisely this showed the extent to which 500,000 citizens of Tomsk can be fully justified in considering themselves hostages of technical progress in the physical sense of this word. For the ancient university city of Tomsk is located just 12 km from the largest nuclear facility in Siberia—the SCC—which is involved in the production of weapons-grade plutonium, uranium, and transuranic elements. It includes a whole series of production processes that are potentially dangerous to the population and environment.

The city has one single-track railroad, one motorway with the only bridge across the river Tom, and a small airport with a limited capacity. No comment is necessary, as they say.

It was precisely for this reason that the administration of the city, scientists and teachers at Tomsk higher educational institutions, medical people, and the public from various ecological organizations sounded the alarm. All of them are coming out in a single front in the fight against Tomsk-7, which has been renamed as the city of Seversk in honor of the victorious glasnost. On this side, the indisputable leader is Aleksandr Martynovich Adam, chairman of the oblast committee on ecology (he is deputy head of the oblast administration). On the other side of the ecological barricade is Professor Gennadiy Petrovich Khandorin, general director of SCC. And behind him is the Ministry of Atomic Energy of Russia and...technical progress, which cannot be stopped.

The fight developed around two still-unbuilt facilities at the SCC—a nuclear station (a joint Russian-American venture) and a depot for dismantled missile warheads brought here from throughout the country.

**From a conversation with Valeriy Konyashkin, assistant to the chairman of the oblast committee on ecology:**

"...They are now intentionally getting us used to the fact that the depot must be built because the 'materials' have already been delivered and they are not being stored properly. This is blackmail. If they begin construction of the depot now, five or six years will pass and the 'materials' will still be stored..."

**From a conversation with G. Khandorin:** "It is my profound conviction that the 'greens' are working to crush the nuclear industry in Russia.... They want to listen only to themselves and are sowing panic.... This situation is more political than technical..."

Under the treaties on nuclear arms, we are removing warheads stuffed with plutonium from combat missiles. At the same time, however, we are continuing to "cook" plutonium for new warheads at at least three places—at a mining and chemical combine (at Krasnoyarsk-26), at the "Mayak" Scientific Production Association (Chelyabinsk-65), and at the SCC. There is rather reliable information that the stocks of weapons-grade plutonium in Russia amount to more than 140 tonnes, which is one and a half times the corresponding stocks of the United States. And how are these tonnes stored? As in Seversk? After all, a small critical mass of plutonium-239 can lead to a chain reaction—in other words, to a nuclear explosion in the wastes if there is a violation of the rules for their transportation and storage. Today the situation is such that a terrorist can seize a depot with containers (in which no one knows whether there are one, two, or three warheads) and...dictate his terms to the entire country. Thank God no one has yet thought of this and the facilities at the SCC are guarded properly. For example, they did not show me anything other than the site where the wastes of all categories of activity from the so-called chemical-metallurgical plant (facility No 25 in the local vernacular) found their final resting place.

**From a conversation with Professor Leonid Rikhvanov, department head at Tomsk Polytechnical University:**

"...The water supply is a problem for Tomsk. About 40 million cubic meters of radioactive wastes have been pumped into the ground and this is continuing. This is 17 km from the test range: in one section they are pumping and increasing the pressure but in another it is the opposite—the pressure is low and there are craters of depression.... They tell us that there is no migration of water and everything is staying at the test range and will never go anywhere. But geologists and hydrogeologists are asserting the opposite: there is no protective layer. They pump it into the lower layers and we drink from the middle layers...."

We need immediate and serious investigations. For we already have the sad experience of Krasnoyarsk-26, which hardly anyone knows about. They also decided to build a burial ground on the other bank of the Yenisey. The tunneled under the river at two levels. Underneath was a pipeline for wastes and above that the tunnel was for motor transport. Scientists showed the absurdity and danger of this measure. The result of this fight was the suspension of construction and the site was closed. Now the tunnel under the Yenisey remains as another monument to domestic mismanagement.

**From a conversation with V. Konyashkin:**

"...There is an international agreement on the nonimportation of nuclear wastes from abroad. And no country accepts these wastes. Then somehow they were able to get an amendment through the Supreme Soviet under which these are not wastes but secondary raw materials...."

It as a matter of deliveries by the firm "Kozhema" of spent fuel from a French nuclear power station for enrichment at the SCC. Under the contract, the enriched product is returned to the home country and wastes from this production process remain here, at Tomsk-7, or Seversk, as it is now called.

**From a conversation with G. Khandorin:**

"...The Europeans are catching up with us in the technology for the separation of uranium isotopes and enrichment of the uranium product. We can lose orders. Yes, the money from "Kozhema" goes directly to the SCC. And every entrepreneur has the right to receive money for his work. It is not the oblast center that is receiving the money and this is disturbing them...."

It seems that the SCC has already lost one order. The SCC offered its services to the renowned west German firm Siemens for the reprocessing and modification of its uranium materials, which, in the words of G. Khandorin, had not even been irradiated. The deal was made but "someone had to ruin everything" and an article appeared in DER SPIEGEL to the effect that Germany was sending wastes to Russia and it is forbidden to bring in wastes.

**From a conversation with G. Khandorin:**

"...The Germans are now demanding confirmation that the people are working on their material safely. I told them to go to the devil! That is too much trouble. It is not your

business what they do in Russia. We are giving you your material. If you do not like it, go to hell...."

Gennadiy Petrovich thinks that a "competing firm" interfered with their relations with Siemens. And these nervy Tomsk "greens" regularly interfere in the relations of the SCC with American atomic scientists. In the opinion of G. Khandorin and V. Mikhaylov, minister of atomic energy of Russia, a nuclear power station needs to be built at Tomsk-7. And in response to the objections of the "greens" that it is impossible to perform a Russian-American experiment precisely here, they say that the reactor is not experimental. Under their plans, a reactor of the new generation will simply be modernized. After all, one must do something with the plutonium produced by our country and by our American colleagues. And there is just one way to get rid of plutonium—load it into a nuclear reactor and burn it. Tomsk has an urgent need for electric power. It meets 75 percent of its needs at the expense of neighboring oblasts. This is expensive. The oblast enterprises are becoming uncompetitive. It would seem that it would be better for them to fire up a new reactor with dismantled warheads and thereby obtain cheap energy. But no, the ecologists stood like a wall.

They are not against technological progress. And I dare say that their goal is not to put an end to domestic nuclear energy. They and the population of Tomsk are concerned only about how safe it will be for them to have such a "gift" from America next to them (the United States is prepared to finance the construction of the nuclear power station at the SCC).

Because of the lack of federal financing, no measures have yet been taken for the social protection of the population living within a 30-km radius of the SCC. There is no possibility of laying another railroad track from the Transiberian Line through Tomsk and there is no possibility of improving the motorways and establishing the necessary stock of the means for individual protection, medication, and emergency food supply. The government and the Ministry of Atomic Energy of Russia must take the necessary measures and do everything that they can to ensure the safety of the people living in an area larger than some states. Otherwise who will benefit from the technological progress that has so generously spread its wings over the ZATO under the number seven, now called Seversk?

#### **Kaliningrad Environment Protection Viewed**

WS2610120594 Kaliningrad KALININGRADSKAYA PRAVDA in Russian 4 Oct 94 p 2

[Article attributed to "Business-Contact" agency: "Invest Your Money in the Air"]

[FBIS Translated Text] Environmental problems enjoy much publicity nowadays. Half a year ago, the residents of our oblast were informed of a happy circumstance: So far, there is no threat of an environmental catastrophe. However, according to the National Report on the Health of Population in the Russian Federation, which was granted to us by the Oblast Committee of Nature Preservation, the statistics of cancer diseases, which are linked with the environment by experts from the entire world, leaves a



rather gloomy impression, to put it mildly. Kaliningrad Oblast is among the indisputable "champions" in statistics for the Russian Federation.

The reasons for this may become obvious even for those with a little knowledge of figures depicting our environmental situation. The share of water tests failing to satisfy the sanitary norms for water supply amounts to 30 percent. This is one of the highest unfavorable indicators in Russia. This year's situation has slightly improved, due to the closure of a number of industrial enterprises, in particular, the pulp-and-paper combine. However, taking into account that the pollution of the main water supply source, the Pregola River, increases because of both industrial runoffs and feces, the problem of purity of drinking water remains very acute.

New Kaliningrad sewage treatment facilities have already been under construction for 18 years, thus matching the House of Soviets in the length of construction period. According to experts, \$48 million is needed to complete their construction.

The air does not have fewer problems. It is polluted rather intensely by 529 city boiler houses. True, it is hard to say how intensely. Among the six stations for scanning the atmosphere, only one is still operational, but it has outdated equipment. The construction of a city heat and power plant may improve the environmental situation considerably. However, its completion also requires \$750 million. The sum is gigantic, but one feels encouraged by the fact that the federal budget has not cut off subsidies for this project. According to optimistic prognoses, the heat and power station may be put in operation in 1996. Thus, we will still inhale smoke and soot for a couple of winters.

According to experts, city soil is heavily polluted, too. The examinations conducted by the Kaliningrad Hydrogeological Expedition in 1993 showed that Kaliningrad City soil is heavily polluted with lead, zinc, and other toxic substances. Their concentration in the city territory is well above the maximum permissible concentration, while exceeding it even by 10-15 times on certain considerable areas. Therefore, the authorities strongly advise against growing garden fruits and vegetables.

We need considerable subsidies for resolving environmental problems in our region. The local budget is obviously insufficient, especially after the partition of the environmental fund into nine local funds. As of today, none of the local environmental funds is capable of covering the cost of an environmental project with any significant aid. Apart from this, industrial enterprises, which are in a sorry plight, have sharply reduced their withholdings paid to the environmental fund, and it is practically impossible to enforce fines from them.

We cannot also hope that our Western neighbors will fully resolve our problems. For the time being, their assistance is limited to analyzing the environmental situation and working out projects. However, their significance is nullified by the lack of any long-term plans for developing industry in our region. No serious financiers will invest money in such projects. We know only one example—the construction of sewage treatment facilities in Gvardeysk, which is financed by Denmark. In developed countries of

the West, strange as it is, the burden of financing the construction of sewage treatment facilities is on local residents. In essence, the costs are covered at the expense of high—tens of times higher than in our country—water rates. Under our circumstances, a similar system will hardly yield desirable results. The increase of charges for municipal services has not improved their quality. Incidentally, it has been a long tradition in the West to hold public discussions over projects affecting the environmental situation in some way or another. As for our taxpayers, they, unfortunately, do not know where their revenue goes. It is no mere chance that Kaliningrad residents have no idea what the budget of municipal services looks like. Nobody cares to inform them about it.

Naturally enough, such a deplorable environmental situation prepared the ground for the consumer market of "individual means of environmental protection." Offers of biological filters for toilets appeared on the market. Our collaborators have registered about 10 diverse filters for cleaning drinking water, most of them produced in the West. The perpetual advertising of "Aqualife," a U.S. filter for the treatment of drinking water, by Central Television testifies to the fact that big entrepreneurial structures have already seen an immense opportunity in this sector of Russia's consumption market.

In our region, this sector has been handled by such a major corporate structure as Baltintentr. Baltintentr offers various U.S. filters—various both in price and treatment capabilities—for cleaning water, which are produced, like those advertised by the Central Television, by the Tele-dyne Water Pik corporation. The only difference is that these filters offered by the Baltintentr are also being utilized in the United States, while Moscow advertises their special version for Russia. They are really good in treating water: They absorb solid impurities and salts of heavy metals, while the most expensive models also dechlorinate water, thus making it virtually spring quality.

The region's sharp demand for such products guarantees Belintentr's success. From the point of view of consumers, it is good that this business is handled by a big stable firm. At least, the firm is capable of handling the issue of service. However, it is a pity that the money paid for those filters will essentially go to the United States. This money could be utilized here, in our region, for completing the construction of those sewage treatment facilities. Apparently, our residents prefer, for the time being, to pay their hard-earned money to Americans more readily than to our domestic bureaucrats; at least, they prefer to do so of their own accord.

The filters will protect people from harmful impurities in water, especially those with bigger incomes. The impact of polluted air can be neutralized by gas masks, even though they, it should be admitted, are not aesthetic devices. But what about the well-known thesis [by Dostoyevskiy] claiming that "the beautiful will save the world?" Seemingly, our entrepreneurial structures will have to think about the production of beautiful gas masks if we are to choose the path of "individual means of environmental protection;" the U.S. filters, incidentally, look rather attractive.



To take a more serious view, all this provides reasons for participation in environmental protection by all entrepreneurs. This is the case when money can be made literally out of the air by participating in big projects as well as in production and trade of diverse equipment intended to protect the environment and man.

### **Federation Council Ratifies UN Convention on Climate**

*LD2510201294 Moscow ITAR-TASS World Service  
in Russian 1415 GMT 25 Oct 94*

[By ITAR-TASS parliamentary correspondent Lyudmila Yermakova]

[FBIS Translated Text] Moscow, 25 Oct—Russia became the 65th country to ratify the UN convention on climatic changes. The Federation Council approved today the federal law on the ratification of this framework Convention which the State Duma had passed to it.

According to the conclusion of the Federation Council's Social Policy Committee, the aim of this legal act is to "stabilize the concentration of hothouse gases in Earth's atmosphere at a safe level." The industrial activities of industrially developed countries have led to an accumulation of a huge amount of hothouse gases in the atmosphere. These include carbon dioxide up to 61 percent, and methane up to 23 percent. If no measures are taken to reduce the emission of gases the human race can expect dangerous consequences. For instance, in the southern regions of Russia the steppes will dry up and there will be continuous drought, and in the mild climate zone optimal conditions for the spread of diseases and parasites will develop.

The Russian government has set up an interdepartmental commission on the problems of climatic changes to ensure coordination in carrying out the country's obligations set down by the convention, in particular in saving energy and reducing the number of power-consuming manufactures, in channelling funds into forestry, and in developing new technologies.

### **'Grave Fears' Over Provisions of Nuclear Waste Law**

*MM2710152594 Moscow ROSSIYSKAYA GAZETA  
in Russian 27 Oct 94 p 1*

[Article by Yevgeniy Skukin: "The Whole Country—Is It a Danger Zone? A New Law Could Turn the Country Into a Radioactive Waste Dump"]

[FBIS Translated Text] At the end of the first session, the State Duma gave without any discussion a first reading to the draft federal law "On State Policy in the Sphere of Handling Radioactive Waste." The second reading is scheduled for tomorrow.

But when the draft law was discussed in committee for the first time on 20 October, the deputies got stuck on the very first article, a seemingly innocuous article, but essentially the principal one—the definition of the concept of "radioactive waste." There was strong protest against the proposed concept from Academician Mikhail Lemeshev,

chairman of the committee and chairman of the All-Russian Antinuclear Society. But all in all opinion in the committee was evenly divided: four "for," four "against."

According to Doctor of Economic Sciences Viktor Danilov-Danilyan, academician of the Academy of Economic Sciences, minister of environmental protection and natural resources, and one of the opponents of the concept behind the draft, in accordance with the wording of Article 1, spent nuclear fuel will no longer be seen as waste and, therefore, none of the draft law's interdictions apply to it. This flings open the door to imports of spent nuclear fuel. But in terms of classification there is no difference between spent nuclear fuel and secondary raw material. It can be processed, and this is what is being done in many countries.

In short, if the law is adopted in its present wording, the Ministry of Atomic Energy—the same "Mayak" Production Association about our paper recently wrote—will get new contracts for the processing of foreign nuclear waste and the population will get troubles by the score, which no amount of foreign currency will compensate for.

Tamara Zlotnikova, deputy chairman of the Ecology Committee, chairman of the Subcommittee on Ecological Safety, and member of the working group to prepare the draft law "On State Policy on Handling Radioactive Waste," believes that the draft law has been reshaped by Ministry of Atomic Energy lobbyists:

"Instead of a law geared to implementing the Duma's principles of ecological safety and protecting the environment and the population's health from the effects of radioactive waste, it turns out to be a law providing a legal basis for turning Russia into a world radioactive waste dump. Indeed, it will simply annul the right of citizens to a good environment and good health!"

The semiadopted and semidiscussed law flouts for the Atomic Energy Ministry's benefit a whole cluster of laws guaranteed by the Constitution. Under the laws on the protection of the environment and on urban development and public associations, citizens can defend their positions via the court. But the law that is an impostor nullifies their rights. It rules out any kind of proceedings or referendum, and citizens with a grievance have only one recourse—public hearings. The same goes for punishment.

So if citizens obstruct the construction of waste-processing enterprises, under the new law they can face criminal proceedings. But for a nuclear industry official to be prosecuted, the consequences would have to be serious—we always have to have human casualties to atone for!

The draft law contravenes the Administrative and Criminal Codes. Articles 96 and 97 of the State Duma Standing Orders (government findings and other validating materials were absent), the mechanism for preparing a draft law in a working group, and so on were seriously violated when it was submitted for its first reading.

As we can see, the experts have grave fears about the future law. The deputies still have time to weigh all the pros and cons and make the right decision for the benefit rather than to the detriment of Russia.

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### **Plan To Complete Krasnoyarsk Reprocessing Plant Protested**

MM2410102794 Moscow NTV Television in Russian  
1600 GMT 1 Oct 94

[From the "Today" newscast: Report from Krasnoyarsk-26 by Dmitriy Novikov and Vyacheslav Utkin]

[FBIS Translated Excerpt] [Novikov over video of cars on highway, exterior, interior of unfinished nuclear waste processing plant]

**Novikov:** This is Krasnoyarsk-26, the site of the formerly secret plant for the production of weapons-grade plutonium. According to Russian nuclear industry experts, one of Russia's biggest combines for the reprocessing of nuclear fuel was to have been built here on the banks of the Yenisey. The construction of this plant was begun back in the seventies. However, work was discontinued in 1986 because of lack of funds and environmentalists' protests. Now, eight years later, nuclear industry experts are again talking about the need to resume construction of the RT-2 plant.

Meanwhile local inhabitants have dubbed the future plant the "Siberian nuclear monster." Krasnoyarsk environmentalists demanded this week that the municipal authorities hold a referendum. Environmentalists suspect that, as so many times before, they are not being told the whole truth. Geneticists are backing the environmentalists. They are asking the nuclear industry experts to think again. Geneticist Lyudmila Chistokolenko has studied the effects of radiation on the human organism for the past 10 years.

[Chistokolenko to camera, inside the plant] **Chistokolenko:** If we create these additional facilities now, our grandchildren will have to devote all their lives not to building and creating something new, they will have to spend all their energies on containing this [waste], vitrifying it, trying to stop it from breaking out, because it will, all the time, try to break out.

**Novikov:** According to Lyudmila Chistokolenko, the development of nuclear industry in the world has reached an impasse. There are no new techniques for dealing with radioactive waste. Furthermore, as a result of the operation of hundreds of nuclear power stations, mutation of the human organism is gathering pace, she believes.

A whole series of Asian and European countries have already shown interest in the completion of the RT-2 plant. Nuclear experts are confident that the plant would be economically advantageous for Russia. The RT-2 plant will be able to reprocess not only spent nuclear fuel from Russian nuclear power stations but also fuel rods from Sweden, Britain, or Japan. The Russian nuclear industry is now waiting for an edict from President Yeltsin on resuming construction of the RT-2 plant.

Yevgeniy Kudryavtsev is one of the people directly involved in developing the future plant's technologies. He is confident that Russia is choosing the safest and most correct method of getting rid of nuclear waste. He does not understand why Krasnoyarsk environmentalists are again raising the alarm.

[Yevgeniy Kudryavtsev to camera, over glimpses of nuclear facilities]

**Yevgeniy Kudryavtsev:** I believe that given a sensible approach, all the problems can be resolved satisfactorily. All the burial sites and the waste which already exists as a result of the operation of Krasnoyarsk-26, and the new ones which may be created as a result of the operation of the RT-2 plant must be, and will be, built in such a way as to have no impact on the environment. This is possible. Existing experience and practice show that this is an entirely feasible objective.

[passage omitted—street interviews expressing skepticism]

### **Foreign Radioactive Waste Storage Law Changes Opposed**

LD2810110594 Moscow ITAR-TASS World Service  
in Russian 1636 GMT 27 Oct 94

[By ITAR-TASS correspondent Aleksandr Shuvalov]

[FBIS Translated Text] Moscow, 27 Oct—The Russian Federation Ministry of Environmental Protection and Natural Resources categorically rejects any proposals connected with the possibility of burying radioactive waste from abroad in Russia. It declined to agree a State Duma draft decision proposed by the Atomic Energy Ministry, one of the points of which substantially emasculated the essence of one of the most important provisions of the law "On the protection of the natural environmental." ITAR-TASS learned this today from the ministry's press service.

At issue is point 3 of Article 50 of the law, which bans the import into Russia of radioactive materials and waste from other states for storage and burial. Russia's Atomic Energy Ministry proposes that it should not apply "to spent fuel of nuclear installations imported from other states which is to be temporarily stored for subsequent processing, and burial of radioactive waste within the framework of international treaties of the Russian Federation."

This formulation evoked resolute objections by ecologists, who believe that "a ban on the import of spent nuclear fuel cannot be lifted for countries which have not concluded treaties with the USSR, the observance of which the Russian Federation is continuing to observe." At the same time, the Ministry of Environmental Protection and Natural Resources believes that existing bilateral agreements must be corrected and supplemented by provisions which would envisage the return of nuclear waste to the country of origin after it has been processed.

### **'Mayak' Plant Radioactive Waste Poisoning Nearby Village**

95WN0016A Moscow ROSSIYSKAYA GAZETA  
in Russian 22 Oct 94 p 3

[Article by Anatoliy Usoltsev: "Destructive Light of 'Mayak': Involuntarily a Ural Village Attracted the Attention of the Safety Service"]

[FBIS Translated Text] The "Mayak" [Lighthouse] Production Association has been operating in Chelyabinsk Oblast for 45 years now. After the war, they built a defense

facility that is extremely dangerous to nature and to the local inhabitants. As is usual in Russia, this was done without any consultation, secretly, and in record time. Beriia himself supervised the construction. And "Mayak" together with related plants began to produce atomic bombs. But the radioactive wastes were poured into the quiet little Ural river Techa, where the village of Muslyumovo stands.

Over the years of the operation of "Mayak," the river and its floodplain accumulated large deposits of nuclear filth. A commission established in 1991 by the former Academy of Sciences of the USSR was forced to officially acknowledge that the soil of the Techa floodplain was "solid radioactive wastes." Under the legislation then in effect, such wastes were supposed to have been removed to special "burial grounds" and the inhabitants should have been evacuated from the danger zone. But who paid any attention to the laws in those years....

They continued to release the deadly wastes into the cascade of open reservoirs. The nuclear poison spread over an area of 87 square kilometers and the volume of contaminated water exceeded 400 million cubic meters.

Gulfarida Galimova, a physician at Muslyumovo Hospital, was at first skeptical about the complaints of the villagers with respect to their health: are they not simply trying to be admitted to the hospital? She then began to keep a record of the illnesses, performed some repeat examinations, analyzed the reasons for mortality, and identified a "Muslyumovo syndrome"—the noxious influence of small doses of radiation on health.

But they did not listen to the "call" of the village physician. The Chelyabinsk Institute for Biophysics, which had always been fed from the table of the atomic department, did not confirm the connection between the "Muslyumovo syndrome" and the radiation received. And this deprives the victims of hope for the foreseen medical and material assistance.

It is curious that according to that same institute the maximum level of radiation in the village of Muslyumovo exceeded the norm by a factor of 40 even back in 1988. Is this not why more than half of the patients in the children's hematology department of the oblast hospital were brought from territories contaminated by "Mayak"? In 1985, according to the physicians, the mortality among the children coming here was 80 percent. This index has now been reduced thanks to Western equipment that the hospital received in the scope of humanitarian aid.

The physician Gulfarida Galimova took her bitter conclusions to the ecological educational organization "Movement for Nuclear Safety." Ecologists helped her to communicate with scientists from Akademgorodok in Siberia. Specialists from the Novosibirsk Institute of Cytology and Genetics of the Russian Academy of Sciences confirmed the "diagnosis" of the village physician. Analyses of the blood of inhabitants of contaminated territories showed the presence of a radiation factor provoking cytogenetic and chromosomal aberrations. That is, small doses of irradiation slowly but surely destroy the genetic system of man, shortening his life. They wanted to continue the investigations but such analyses are too expensive.

There was another opportunity to verify the conclusions on the existence of a "Muslyumovo syndrome." Recently a delegation of teachers from California University came to Chelyabinsk Oblast with humanitarian help for Muslyumovo—compounds and medication. At the request of the public organization "Movement for Nuclear Safety," American scientists agreed to arrange for the costly analyses to be done in the United States. Naturally the physician Galimova began to prepare lists of volunteers from the village who had given up trying to prove the connection between their illnesses and nuclear production activities and she began to take blood samples for independent examination.

But at the last moment, sensing the close attention of counterintelligence agents, the ecological activists decided not to turn these samples over for analysis.

The teachers from California University returned home but Yuriy Tkachev from the FSK [Federal Counterintelligence Service] nevertheless invited Gulfarida Galimova for a talk. He severely reprimanded Galimova in the presence of Ivan Moiseyenko, deputy chief physician at the central rayon hospital, and Saniya Garifanova, chief physician at Muslyumovo Hospital: How did she dare to take blood samples from inhabitants of Muslyumovo for independent analysis?

Later in the course of the conversation, those present were told that not even a rock from the village could be taken out of Chelyabinsk Oblast. Why not? The explanation was fuzzy: this, they said, is an object of strategic interest to the nuclear people.

And this is what Lika Galkina, coordinator of the antinuclear campaign "Greenpeace" had to say about what happened:

"The Ministry of Atomic Energy is attempting with the help of the FSK to conceal information about the health of the population. And this helps 'Mayak' to get new contracts for the reprocessing of foreign nuclear wastes."

Still, they were not able to intimidate the ecologists. Activists in the "Movement for Nuclear Safety" organized two picket lines in Chelyabinsk and collected about a thousand signatures to pursue the incident at hand and to grant the inhabitants of the contaminated territories the right to independent medical examination.

...In April 1993, President B. N. Yeltsin signed an edict on the provision of help to the population of those rayons of Chelyabinsk Oblast that were subjected to radioactive effects. The Government of the Russian Federation allocated funds for the execution of a state program for the radiation rehabilitation of the Urals region and for assistance to the suffering population through 1995. The money has been allocated but this does not make it easier for the people in Muslyumovo.

Recently a commission of the Control Directorate of the Presidential Administration revealed that with the connivance of the oblast administration some of the local chiefs used rehabilitation money to build cottages, to buy automobiles, and to go on trips abroad.

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## BELARUS

### Article Views 'Nontraditional' Energy Conservation Methods

WS2610153694 Minsk ZVYAZDA in Belarusian  
21 Oct 94 pp 1, 3

[Report by Yuras Navumenka: "We Should Keep Our Rooms Warm in Winter"—first paragraph published in boldface]

[FBIS Translated Text] Energy conservation has become one of the most vital goals of our state. Consumption of main types of thermal and power energy in winter is usually 1.5-2.2 times higher than normal. Consumption of electric power per day is usually increased from 85 million kilowatt/hours to 130-140 million kilowatt/hours. Consumption of thermal energy is usually up by 2.5 times.

Our republic has consumed some 30 million tonnes of conventional fuel [tcf], including some 56 percent of gas (16.8 million tcf), 40 percent of residual oil (12 million tcf), and 4 percent of coal, firewood, and peat (1.2 million tcf) in 1994. The republic's national fuel reserves account for only 14 percent (4.2 million tcf) of this amount. Russia is our primary supplier of energy resources. Our mutual accounts are primarily held on a clearing-house basis.

Our power engineering experts, as well as the Belarusian Committee for Energy Conservation and Control, are actively looking for additional ways of energy conservation. They are also campaigning for installing electric energy meters. Our industry is planning to produce some 18,000 electric heat meters, 150,000 hot and cold water meters and gas meters, and 180,000 electric power meters. In addition, our specialized enterprises will be equipped with some 400 moisture traps, 200 temperature regulators, and 300 burners. Every moisture trap will conserve some 44 tonnes of tcf yearly, a temperature regulator—127 tonnes, and burners—48 tonnes. The implementation of this program will allow the conservation of 170 tonnes of tcf by the end of 1994 and of 50 tonnes by the end of the first quarter of next year. These conservation measures will account for the conservation of 1.1 million tonnes of tcf in 1994 and for 324,000 tonnes in the first quarter of 1995.

What are the obstacles to maintain proper energy conservation? There are a lot of reasons for this situation. They include ambiguous tariffs, improper energy conservation measures, poor trained personnel, staff irresponsibility, and poor payment discipline.

The Belarusian Committee for Energy Conservation and Control is fixing its attention on methods of rational consumption of heat-and-power resources that are quite new for Belarus. The Tractor Factory [MAZ] and the Vehicle Factory in Minsk, as well as "Tekhnaprybor" in Mogilev, are working on the implementation of these methods. "Tekhnaprybor," for example, has developed and is implementing its own program which allows 50-percent conservation of thermal energy. The MAZ program will allow for the conservation of 16,700 tonnes of tcf yearly, or 9 percent of the consumed fuel. MAZ engineers have drafted a program, the implementation of which will allow for the conservation of 46 million kilowatt/hours of

electric energy, 49,800 hectoliters of thermal energy, and 8.5 million cubic meters of natural gas.

In addition, the Belarusian Ministry of Energy—at the instruction of and in agreement with the Belarusian Committee for Energy Conservation and Control—is planning to remove from production energy-intensive goods that are not in demand and to modify the system of production. This will allow for the conservation of 135,000 tonnes of tcf in 1994 and of 45,000 tonnes of tcf in 1995.

Our power engineering experts have far-reaching plans. According to the government's power engineering and the energy conservation programs, the establishment of non-traditional power engineering [malaya energetika] is under way in the republic. According to a new program—foreseeing the use of both nontraditional (water and wind-power, as well as biomass and sun energy) and traditional sources of energy (organic fuel)—the republic will construct mini electric power plants on the basis of existing boiler houses and fuel oil electric power plants. Small pumped-storage electric power plants—in Dobromysli in Vitebsk Oblast, in Zhamyslaw and Voytashchyzna in Grodno Oblast, and "Hanales" in Minsk Oblast—have been modernized over the last three years. Pumped-storage electric power plants in Gomel, Lukoml, Kiyastsitsy (Vitebsk Oblast), Lakhovzy (Brest Oblast), and Mstislavl (Mogilev Oblast) are also being modernized.

A project to build a large pumped-storage electric power plant—with a production capacity of 2,000 kilowatts—at the water reservoir in Vileyka is currently under way. Small pumped-storage electric power plants with a production capacity of 120,000 kilowatts—producing over 500 million kilowatt/hours of electric energy—will be modernized and constructed by the year 2010.

The republic is planning to receive some 150,000 tonnes of tcf from a bioenergy facility—dealing with the treatment of animal husbandry manure—in Brest Oblast. Similar facilities will be put into operation in select farms in Minsk and Vitebsk Oblasts, however, they would handle poultry manure.

Windpower will not only heat and pump water, but also provide consumers with gas and electric energy. A back-pressure turbine using the gas pressure in industrial boiler houses is considered to be good prospect. According to rough estimates, a mini thermal-power plant consuming small amounts of gas—some 10-20 percent—will produce 1,000 megawatts of electric energy. Boiler houses at "Bel-palivahaz" concern factories producing peat blocks will be equipped with 5 turbines produced by a turbine factory in Kaluga [Russia]. Housing and municipal services in Brest and the Television Sets Factory in Vitebsk are going to build mini thermal-power plants as well.

We can only welcome such efforts; there is no other way out. If an enterprise wants to make a profit, it should save energy. If an enterprise wants to keep a normal temperature in its rooms, it should manage to conserve energy.

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## ESTONIA

**Environmental Damage by Russian Military Detailed**

95WN0003A Tallinn PAEVALEHT in Estonian  
31 Aug 94 p 2

[Commentary from Andres Tarand, Environmental Minister, by Marek Dreving: "It Would Take Seven State Budgets to Repair the Damages Caused by the Military"]

[FBIS Translated Text] *According to data released recently, repairing the environmental damages caused by the Russian military due to leave Estonia today, would cost 54.75 billion kroons. The USSR army had possession of 570 landed objects, with a total area of 83,651 hectares, which amounts to 1.8 percent of Estonia's territory. The assessment of damages was done by an inter-agency group of experts. PAEVALEHT asked environmental minister Andres Tarandi to comment on the extent of damages, and the prospects of repairing them.*

First, it should be pointed out that such estimates are never final. The sum approaching 60 billion kroons could be changed somewhat by so-called little items but, by and large, it is a correct indicator.

One debatable fact is that we have not taken into account everything that could be turning up later. Secondly, it is always possible to argue about the methodology of how the cost was calculated. However, the order of magnitude shows that removing the consequences would, based on the current budget figures, cost us seven times our annual budget.

The task is clearly too big to be resolved with Estonia's own resources alone. Close to one quarter of that amount goes for pumping aviation fuel out of the ground water, and cleaning up soil that has been polluted by oils. This is very expensive work.

Cleaning up the area around the Paldiski reactor does not require much deactivating, like removal of soil, because local pollution is small. But coming up with a container for waste conforming to internationally recognized norms, that we are stuck with now, will be outrageously expensive.

Two thirds of all the damages come from Paldiski because everything linked to radioactivity is subject to special requirements. At the same time, we have to make it completely harmless, otherwise there will be no future for this area. It is not particularly dangerous, in and of itself, but there is also keen competition to contend with.

Of the airfields, the five major ones should be mentioned. The biggest ground water damages have been caused at Tapa, then Tartu and Amari. Haapsalu is, to some extent, still unknown to us. From the Pärnu airfield, the petroleum has already run off to the sea along the Sauga River.

Ground water damages caused by airfields have been estimated at more than 4 billion kroons, while a slightly smaller amount—close to 4 billion—is estimated for soil damages.

Damages from rocket bases are relatively smaller. We had quite a few of those, since the so-called third belt of

Moscow's air defense ran right along Estonia's coastline. There have also been fuel spills at the rocket bases, but most of it has been cleaned up.

Another big object is Sillamäe, on which a new report has just been completed as a cooperative project between Finland, Sweden, Norway and Estonia, detailing what is there, and what needs to be done. Our estimate shows the amount of damages there approaching 1.7 billion. Understandably, these calculations do not provide for removing or shipping out all of the radioactive waste, because there is no country that would take it in and, besides, it would take astronomical amounts of money. As an idea, at this stage, we have a plan to build a sarcophagus, like the one in Chernobyl, and to use the ash of shale rock, which can be turned into cement, to cover the top of the container. However, the container also has to be isolated from ground water and the sea.

Then, there are also storage areas for explosives, chemicals and fuel, where the most conspicuous damage is littering, which is not particularly hazardous. All of this combined, however, will add up to another quarter of a billion. The proving grounds, of which there are relatively many in Estonia, still contain unexploded materials, i.e. strictly military waste.

To be added to this total, is also pollution at the bottom of the sea. Some of it has also been mapped with the help of Sweden, but how much all of this will cost would depend on what is there.

Pollution left by the Russian military is by no means the only kind, enough pollution has also been produced by civilian life. Right now, the most successful activity on behalf of the environment has been in water purification. Funding for the water purification facilities in Tallinn and Tartu was combined with foreign aid, and Estonia's share in it was minor.

Results have been extremely positive at the Kunda cement factory, where initial investments run to \$7 million. All these things will have to be done apart from Russia's military damages making Paldiski, for example, something that the state of Estonia could not tackle in the near future, and leave us hoping for international aid.

U.S. president Bill Clinton, on his visit to Riga, mentioned \$2 million for Paldiski. Some promises were also received during the recent Tallinn visit of the Swedish foreign minister. Finland, too, has promised specific help to solidify liquid radioactive waste, so that it would be easier to handle.

For the time being, the government does not have a detailed plan of action for what we want to do in Paldiski, and whether or not we want to locate our nuclear waste storage there. Discussion on these questions, however, is imminent on the government's agenda.

Right now, the Estonian taxpayer cannot make a significant contribution toward liquidating environmental damages, but it is also clear that foreign aid will be diminishing in the years to come. We'll no longer be interesting enough, nor young enough to be helped and, because of that, our burden will undoubtedly increase.

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In addition to the initial, and very factual help from Finland, Sweden, Denmark, Switzerland and Germany, we could also hope for something from the European Union, but we could not really count on anything beyond that, because the whole world is screaming for money and those handing it out are few in number. We'll have to be very active ourselves to get some additional help. The saying 'help yourself and you will be helped' is also well known in Estonia.

Of contemporary significance, in connection with privatization, is the opportunity to sell certain objects into private ownership but, when it comes to selling, one must be quite clear what it is that is being sold. However, right now we cannot give 100 percent guarantees that there will be no surprises. Special terms can be agreed on only when one can see what is on the land. Problems arise when you cannot write into a contract something you do not know. Court cases like that have already cropped up in Poland and in the Czech Republic and, we too, will have to revise our privatization laws.

Russia is not in the habit of compensating for damages, and there is no reason to think that Estonia would be an exception here. We had to submit figures, of course, because that is part of negotiating mechanics, and a matter of political ritual.

If Estonia and Russia could reach some kind of agreement on the border issue, it would also be possible to enter a number of environmental agreements with Russia, as it is customary between normal states. Another problem is that, according to international principles, damages are paid by the polluter. Our power stations, however, are very close to the border, and most of their pollution winds up in Russia.

All told, the damage amounts are much too big to leave any room for optimism. Actually, some optimism could be derived from the fact that nature can be surprisingly powerful in getting some things done. Right now, the amount mentioned serves as an argument in negotiations between the two states, and the figures could be revised in time.

## KAZAKHSTAN

### Session Addresses Agroecological Problems

954K0143A Almaty KAZAKHSTANSKAYA PRAVDA  
in Russian 20 Oct 94 p 2

[Article by Vladimir Li, KAZAKHSTANSKAYA PRAVDA: "Agroecology—This Sounds Pathetic. Notes from the Off-Site Session of the Kazakh Academy of Agricultural Sciences"]

[FBIS Translated Text] Recently Kzyl-Orda has become a kind of mecca where representatives of various departments gather and hold conferences. This spring a seminar of workers of the republic's law enforcement departments was held here, and just a little later there was one for consumers' cooperation workers. At the beginning of October the Kazakh Academy of Agricultural Sciences held an off-site session in Kzyl-Orda.

Participating in the work of the session were leaders of ministries and departments, politicians and public figures, deputies, and managers of enterprises, sovkhozes, and kolkhozes. On the agenda of the session, which was opened and conducted by the academy's president, G. Kaliyev, were the most critical issues of agroecology for the Aral Sea region.

The crisis that has struck the country has put ecological problems on the back burner of public attention. Passions concerning the dying Aral have died down. Less and less attention is being devoted to the ecological problem of the region and its residents. Attempts were even made to suspend the law on the Aral area. Thank you deputies for defending it. As many seminars, conferences, and meetings as there have been in recent years, there has been an equal number of various resolutions, decrees, and recommendations concerning the Aral. But where is their practical implementation? This year the construction of a dam protecting the sea—Malyy Aral—was suspended. The government does not have the money for it.

The time allotted for saving even part of the sea will pass. And along with it the prospects for restoration of normal life along the lower reaches of the Syrdaraya and the Aral region.

The next forum of scientists in Kzyl-Orda will most likely not change the situation but it could possibly draw the government's attention to both the ecological and the socioeconomic condition of the region.

Agroecology, that is, the ecology of agriculture, is in a pathetic state. With the present situation in rural areas it is not really possible to effect it with our own forces. The restoration of pastures and saline and polluted fields costs money and also requires large expenditures of energy. Here are the figures from a report at the session delivered by the chief of the Kzyl-Orda Oblast administration, S. Shaukhamanov. There are 286,000 hectares of irrigated fields in the oblast. Of these, 215,000 have engineering facilities. Water is delivered to these fields by 27,000 kilometers of main canals. Today this entire gigantic irrigation network is in critical condition since during recent years the state has not allotted a single tenge for its maintenance and reconstruction.

More than 25,000 hectares of land with engineering facilities have already been taken out of economic circulation. In the next few years the same fate awaits another 126,000 hectares. The oblast does not have the funds for reconstruction and restoration of the fields and the state is not allotting them. Throughout the world irrigation farming is supported by state funds. Here all this is the responsibility of the local authorities and the budget. The localities are undertaking to restore the fields and pastures, but there are some things they are not capable of doing. The oblast cannot develop sheep raising either since the feed base has been undermined. On nine million hectares of sheep pastures there are only 6,000 watering places, and only a third of these are in working condition. There is practically no irrigation on these nine million hectares.

Even if funds are found, the problem of the ecology of the agricultural region will not be fully solved. Emergency measures are needed to protect the waters of the Syrdaraya

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from pollution. The republic cannot solve this problem independently. Collective sources of pollution of the river are located outside the republic. Above the Chardarya water reservoir there are 140 drainage and collector systems that discharge about 12 cubic kilometers of unpurified waters into the Syrdaraya. For example, in Kzyl-Orda Oblast there are just three collectors whose flow of drainage water makes up only 1 percent of the overall drainage water from our neighbors. It is reaching a point where one-third of the river water in the Syrdaraya on the territory of Kzyl-Orda Oblast is toxic drainage water. Scientists recently conducted a study of the Chardarya water reservoir and discovered that the concentration of harmful substances and compounds in the water is twice the allowable norms. They have found morphological changes in the organs of all fish inhabiting it. The consumption of this fish for food leads to diseases of the liver, kidneys, and intestine and other dangerous diseases. In the lower reaches of the river, that is, on the territory of Kzyl-Orda Oblast, the water is even more toxic. And yet a considerable proportion of the oblast's population uses this river water since there is no other. Residents of the oblast eat fish containing toxins since there is no other fish either. Vegetables and other agricultural products are also contaminated with poisons. Even the fields are losing their natural productivity because of it. What can be said about the people here?

Toxic chlororganic compounds have been found in the milk of the majority of nursing mothers in Aralskiy and Kazalinskiy Rayons. Just in recent years the number of victims of urolithic ailments has increased 15-fold. During the past 10 years viral hepatitis has afflicted 10 percent of the residents of the oblast and the number of victims of abdominal typhoid has increased fivefold. As compared to 1979 the number of victims of bronchial asthma in Kzyl-Orda has increased 139-fold. Medical examinations have shown a progressive reduction of the protective functions of the immune system of people living in the oblast. They have been infected with ecological AIDS.

The ecology of agriculture is also the ecology of humans. In my view, we must not put these problems off until later. Because a catastrophe could undermine the life of an entire region tomorrow. We have long been faced with the problem of establishing interstate control over pollution of the Syrdaraya. The river, which produces life, brings disaster with it as well. But the matter has never gone beyond words.

For so many years people at all levels have been talking about a program for improving the health of the population of the region. Immense amounts of money, including foreign currency, are being invested in the construction of treatment institutions. The Bulgarians are now completing the construction of an immense oblast hospital. And yet in the hospitals that exist there have no pharmaceutical preparations, cotton, bandages, or medical instruments. The pharmacies are empty or half empty. And this is in an oblast where, in the opinion of medical experts, there are practically no healthy people. Therefore people are fleeing from here, and now it is no longer just the Russian-speaking people but also indigenous people, whose ancestors have lived on this land for thousands of years. Because

they do not believe the government's assurances that tomorrow things will be better.

The participants in the off-site session will excuse me for not giving the names of the speakers and not discussing many of the problems of agroecology. There are many of them. And the range of problems discussed went far beyond the designated subject. The question of increasing the capacity of the Syrdaraya seems important. For the last two years during the period of spring flooding the waters could not be contained within the banks and they had to be diverted into various low areas and old river beds in order to avoid flooding the population points on the lower reaches. During the past decade when the waters have not been high the river has become very shallow and is not capable of holding all the spring waters. For this reason alone the dying Aral is not receiving thousands and millions of cubic meters of life-saving water. The possibilities of assimilating the dried bottom of the Aral were also discussed. It is quite possible to solve all these problems. But this again takes money. The International Fund for Saving the Aral, which was founded last year, has begun to function by running aground financially. The funds being received from the founders are purely symbolic. The World Bank and the Western states are prepared to help, but real help will come from them only if the states of Central Asia can move from words to deeds. One cannot say that no help at all is being given to the region. But it is not sufficient to stabilize the ecological and socioeconomic position of the region, which is deteriorating catastrophically. One can only hope that the recommendations from the scientists and specialists developed at this session of the Kazakh Academy of Agricultural Sciences will help the people of Kzyl-Orda to solve as many ecological problems as they can and that these will be taken into account by the government.

## LATVIA

### Ban Imposed on Water, Fish From Two Rivers Due to Pollution

WS2510092294 Tallinn BNS in English  
1625 GMT 24 Oct 94

[FBIS Transcribed Text] Riga, Oct 24, BNS—The Latvian Environmental Inspectorate has issued a temporary ban on the use of fish and water of the Musa and the Lielupe rivers because of high pollution.

The source of pollution in the Lithuanian territory has not been cleared out yet but specialists say that the dichlorobenzene acid pollution is moving down the Musa river.

The first excess pollution was found Sept. 23 in the Levua river of Lithuania. Dead fish was found Oct. 13 in the confluence of the Levua and the Musa.

### Serious Pollution of River on Lithuanian/Latvian Border

LD2510175394 Riga Radio Riga Network in Latvian  
1600 GMT 25 Oct 94

[FBIS Translated Text] Last weekend the State Environmental Inspectorate received reports from Lithuania that

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the toxic substance Dichlorobenzene acid has flowed into the (?Livene) River, a tributary of the Musa River on Lithuanian territory, which is causing large-scale deaths of fish. At present the pollution has already reached Latvian territory, and dead fish have been observed at Grenctale. It is predicted that the pollution will soon reach Kalnciems. The State Environmental Inspectorate has temporarily banned residents of Bauska and Jelgava regions and Jurmala town from using fish and water from the Musa and Lielupe Rivers.

## MOLDOVA

### Chemical Substances Thefts Grow More Frequent

AU2610183394 Chisinau BASAPRESS in English  
1900 GMT 22 Oct 94

[FBIS Transcribed Text] Chisinau BASAPRESS, 22/10/1994—The stealing of pesticides from state and agricultural warehouses has become frequent, BASA learned from Arcadie Nedelciuc, of the Environment and Natural Resources Protection Department. In the village of Fera-pontievca, Comrat district, the chemicals warehouse was robbed three times; twice, the thieves used weapons. According to Nedelciuc, the stolen chemicals are sold to the shops or in the market though the law stipulates that only the state is entitled to store and sell chemicals. The Ecologic Inspection fined several cooperatives and private

individuals for selling pesticides. According to the environment law, the money earned from fines should go to the Ecologic Fund. However, Nedelciuc said that it is not transferred into the Ecologic Fund's accounts. In his opinion, the courts are to be blamed since they represent the last element in the process of fine levying. Vasile Florea, of the Justice Ministry, said that there are violations of law and that the courts were notified about this. Arcadie Nedelciuc specified that according to Article 53 of the Administrative Offense Code, only courts can apply sanctions to persons storing or selling chemical and radioactive substances.

## UKRAINE

### Water Shortage in Zhytomyr Said Threatening Local Business

WS2810133394 Kiev INTELNEWS in English  
0653 GMT 28 Oct 94

[FBIS Transcribed Text] Zhytomyr, Oct. 27—The lack of precipitation during recent weeks and subsequent decreases in water supplies in Zhytomyr is threatening local businesses, Mayor Anatoliy Fesenko said Thursday.

Although the city council bought special pipes from Sweden to provide water for one month, if there is no rainfall by the end of October, leading local enterprises will be forced to shut down because authorities will cut off the city water supply, Fesenko said.



## GERMANY

**Efforts To Track Environmental Criminals Described**

94WNO392B Duesseldorf VDI NACHRICHTEN  
in German No 32, 12 Aug 94 p 3

[Article by Michael Peter: "On the Trail of Environmental Crime" Berlin Environmental Crime Investigating Police Department in Sisyphean struggle against reckless dumping and waste disposal offenders]

[FBIS Translated Text]

*VDI-N, Berlin, 12 Aug 94. Illegal waste disposal is an offense which ranks highest in environmental crime statistics, the trend being more of this crime and slower crack-down. One day on a tour with the Berlin Environmental Crime Investigating Police Department (KriPo) reveals how unscrupulously very many people dispose of their garbage. The offenders are threatened with small fines only, even for having illegally exported toxic waste to other countries.*

The gate is wide open inviting you to enter. The car of the Berlin Environmental KriPo rolls slowly onto the tract of land. There is nobody in sight. Paul Schroeter hardly expects anyone to be around. Who would get rid of garbage in broad daylight? In the middle of the city? And in this sweltering heat?

Schroeter is looking for a shady spot, gets out of the car, and inspects the huge parking lot in Berlin's embassy district. He proceeds on foot armed with a camera, a pencil, and a notebook. A gun he does not need. The offenders do not shoot. Their victim is the environment. Perpetrators? In their own mind they do not commit a misdemeanor even. Officially, moreover, these are most often ordinance violations only.

"A not very magnificent dirty mess" rails environmental police officer Schroeter. Household garbage and construction debris along with old washing machines and refrigerators are being heaped up wherever a little space is left between old timber piles. "It begins with a refrigerator or a few empty paint pails. If they are not immediately removed, there follow washing machines and carpeting and automobile scrap and so on." Schroeter explains the unwritten law of waste dump buildup.

There is not a big deal involved in this particular case. Still, a few starter batteries and an engine block justify a summons charging the unknown offender with environmentally hazardous waste disposal. This sounds like a wild goose chase: great effort and small tangible return. Who in their right mind would leave their calling card in a car wreck?

Nevertheless, Schroeter believes that doing his duty will have an effect. Because the owner of this tract of land, apparently the Tiergarten [Zoological Garden] district office, is obligated to respond to a summons and more than half-heartedly provide a remedy against the increasing contamination of its land.

Illegal waste disposal is an offense which ranks highest in environmental crime statistics, amounting to two thirds of

the almost 30,000 punishable environment harming violations recorded last year. The trend is: crime rate up, crackdown rate down. And this has been going on for years.

"Waste pushers pay the fine from their petty cash drawer."

"Not least responsible for the awareness of this trend are the keen eyes of citizens who report violations with an increasing frequency" Klaus Toepfer, Federal Minister of Environmental Affairs, praises the general public for being increasingly environment and wrongdoing conscious. According to Hans-Heinrich Lindeman of the Federal Environmental Agency, however, it is not the citizens' perception alone which explains the awareness of steadily increasing environmental delinquency. "There is an actual increase of violations" he emphasizes. This is demonstrated by just the fact alone that illegal waste dumping into waters has surreptitiously surpassed other forms of water pollution.

The headlines report only sensational incidents such as waste smuggling across international borders, for example when German "plant preservatives" appear on the Polish market and when chemical waste dumped in Berlin surfaces in Romania or toxic waste from Germany is found in Bolivia. This business is becoming notwithstanding the publicity, because legal waste disposal is becoming ever more expensive at all levels. Oliver Toelle, senior criminal counselor and second in command at the Berlin Environmental KriPo, explains the violators' arithmetic: "The waste pusher calculates the cost effectiveness of his enterprise simply by figuring the cost of proper disposal, how much is saved by smuggling, and what is the risk involved."

These calculations yield usually the following: small risk of detection and large savings, therefore push! "Should he be caught after all, then he pays the fine from his petty cash drawer," says Toelle. "Only narcotics crime is more lucrative" he concludes.

This sounds like organized crime. "No," emphasizes Toelle categorically, "this has nothing to do with it." Here deals are made involving plutonium and other radioactive materials, but these deals are most often overrated. As a rule, no such deals actually materialize and are merely fraudulent.

Andreas Schoenstedt of the Greenpeace environmental organization confirms this: "There is no Waste Mafia. Talk in these terms only flatters those gentlemen." What gentlemen? "They range from bankrupt merchants intent on making a fast buck to chief executives of large enterprises intent on cutting businesses expenses" is what Schoenstedt found out during the course of his research work.

Toelle concurs with the "making a fast buck" idiom, citing a case characteristic of local Berlin attitudes. He tells the story of a man who issued himself a permit for dumping construction debris on the former Berlin East-West border strip. He offered his debris disposal services to construction enterprises and cashed in 400,000 DM within a shortest time. He still has not been convicted.

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At this point Toelle touches on the subject of penalties. "They are too light and, because of this, are of course not much of a deterrent" he says with exasperation. So is also Schoenstedt of the Greenpeace, angry about "nobody ever having received a jail sentence for illegally exporting waste." The taxpayer is, moreover, asked to pay whenever waste is brought back to Germany. Return shipment and disposal of 460 tons of pesticides from GDR [German Democratic Republic] stockpiles in Albania alone is estimated by the Ministry of Environmental Affairs in Bonn to be costing just under 10 million DM. Only when the Federal Government of Germany translates the Basel Convention regarding export of waste into a national law, will there be established a relief fund for waste disposal enterprises specializing in shipment of exported waste back to Germany and will offenders be given longer jail sentences.

This is a matter of high-level politics, however, while small cases are piling up for the Berlin Environmental KriPo to deal with. Some shed in the Mahlreis district of East Berlin, for example, supposedly serves as a storage place for used up photochemicals. A squad is dispatched and shortly later reports reassuringly that everything has been properly packed and well prepared for disposal.

A small purification plant adjacent to 14 single-family houses on the bank of the Havel river spilled over. The maintenance firm failed to report this notifiable accident to the proper authorities. The environmental police see a picture before them. Nothing spectacular. The responsible Environmental Agency office orders the plant to be closed and the smelly brew to be pumped away.

At a street curb in Tegel stand 15 barrels with construction chemicals. Environmental engineer Hugo Gundelach obtains from the manufacturer in Hamburg information about the potential hazard. The hazard is supposedly is not great, but caution is suggested at a 40°C temperature in the shade.

When officers arrive at the given location the barrels are gone. It is not possible to determine whether their content is used for construction work, or whether they either are on the way to the appropriate disposal site or standing somewhere a few streets down the road. "We are the only post which initiates the first aggressive response, thus immediately proceeds to inspect and probe." "In this respect one could compare us with the emergency physician", Toelle explains the work of his team. The team consists of 60 detectives plus 20 chemists, environmental engineers, and consulting economists. They do not worry about water contamination occurring between two committed murders or about the operation of a plant without license but are engaged exclusively in prosecuting environmental offenses and act as an independent council within the Berlin State Crime Investigation Office.

The time and effort consuming inquiries, especially of gross environmental offenses, prove that this is not just a going along with the current fad of environment consciousness. A person who can say a lot on that subject is First Crime Chief-Commissioner Heinz-Dietrich Kreuzer. As many as five officials of the Berlin Environmental KriPo worked one whole year on just the one case of firm which

had stored solvents in the Spandau harbor. They needed so much time to collect sufficient evidence justifying a summons on charges of environmentally hazardous waste disposal and endangering the groundwater.

#### Environmental Protection Called Too Reliant on Laws

94WN0392A Duesseldorf VDI NACHRICHTEN  
in German No 29, 22 Jul 94 p 16

[Interview with Heinrich Freiherr von Lersner, president of Federal Environmental Agency, by Michael Peter of VDI Nachrichten; place and date not given: "Modern Environmental Protection Is Not Liberal" Federal Environmental Agency has for 20 years been the midwife for Bonn's environmental policy]

#### [FBIS Translated Text]

VDI-N Duesseldorf, 22 Jul 94. The Berlin office of the Federal Environmental Agency (UBA) is not like every other office: behind the scene it wields a tremendous influence on Bonn's environmental protection policy, having in the past been an effective driving force behind important decisions such as introduction of the exhaust-gas catalyst and ban on asbestos. In the future, emphasizes UBA Pres. Heinrich Freiherr von Lersner, the UBA will have an even more powerful impact as it restructures its departments along the pattern of integrated environmental protection.

VDI-N: Mr. Lersner, you have been president of the Federal Environmental Agency for 20 years now. What has been your biggest achievement?

Lersner: This is a difficult question to answer, because success has many fathers. We prevailed on the asbestos-cement industry to withdraw asbestos fiber from the market without legislative intervention. We also played a decisive role in introduction of the exhaust catalyst and in discontinuation of toxic dust burning on the open sea.

VDI-N: And your biggest failure?

Lersner: We still do not have a much needed land protection law. The Federal Environmental Agency is, also without success, advocating a general highway speed limit. Eventually, however, land protection and speed limit will come. Sometimes we keep proposing something for years without getting a response from Bonn. And then, all of a sudden, there is some movement for whatsoever reasons unrelated to the particular issue under consideration.

VDI-N: On the coming Monday the UBA will celebrate its 20th anniversary. Why was such an agency established in 1974?

Lersner: Toward the end of the nineteen sixties they started discussing the limitedness of Earth, but not from a philosophical or religious standpoint. They began discussing pollution of the environment and wasteful use of natural resources, also countermeasure strategies. This is how the modern environmental protection policy was born. It has been recognized in Bonn that no political issue relies as heavily on scientific knowledge as does the issue of an environmental policy. Accordingly, devising such a policy required a mechanism by which all scientific know-how would be put together and evaluated to serve as a the

basis for presentation of proposals. Precisely this task the UBA is performing ever since.

"We act without handicaps"

**VDI-N:** Doesn't the UBA need to have more jurisdiction in this matter? Shouldn't the UBA become as independent as, say, the Federal Bank, which makes decisions without involving either the Minister of Finance or the Parliament?

**Lersner:** This is being proposed over and over again, but I am against it. The agency happens to be Janus-headed one. It is an independent scientific authority and as such free of any handicaps. Its independence has been assured by law, to avoid a situation where the UBA proposes to the Minister of Environmental Affairs only what the latter favors. On the other hand this agency is also a part of the Federal Government and thus integrated into the internal policy shaping process.

**VDI-N:** The UBA is older than the Federal Ministry of Environmental Affairs, which exists only since 1986, isn't it?

**Lersner:** Yes, but one has nothing inevitably to do with the other. It is still being argued whether or not a separate Ministry of Environmental Protection is needed. As a matter of fact, it should indeed be the aim of the environmental policy to eliminate the need for a special Ministry and to make all departments implement environmentally correct policies.

**VDI-N:** Why do we need a separate Federal Ministry of Environmental Affairs at all?

**Lersner:** I am in favor of a department in charge of environmental protection. There needs to be an advocate of environmental protection in the Cabinet, because conflicts of interests too notoriously affect the economy or society. As of today, neither the USA nor other countries have a Ministry of Environmental Affairs.

**VDI-N:** The UBA is now reorganizing to fit into the integrated environmental protection structure. Is this not too late?

**Lersner:** One could say so, but with the new organizational structure we still play the leading role. We are far ahead of the laws and of the Ministry of Environmental Affairs in Bonn or in other countries. Until now we have been organizationally targeting individual media: air, water, and land, also the waste sector. In the future we will tie technical units together department-wise. A unit will be then assigned to cover from beginning to end the chemical industry for instance. The time of integrated environmental protection is nearing. The environmental law does not yet provide a commissioner for environmental protection but still a commissioner for waste, water, and pollution control.

**VDI-N:** How does integrated environmental protection work in practice?

**Lersner:** It signifies a departure from the "end-of-the-pipe" concept. Environmental problems will accordingly not be solved any more by starting at the end of the production cycle. That policy is good for a liberal night-watchman

government. There government dictates what is allowed to go into the dump or into the smoke stack. At the same time, however, it gives the producers all the freedom of ways to attain the established goal. Modern environmental protection has a nonliberal bent. The farther we backtrack from the end of the "pipe" to where it begins, the deeper we infringe on the freedom of the market forces. We then dictate to the producers which products must be made in what way and, by enforcement of packaging regulations, compel consumers as well as the trade people to alter their behavior.

**VDI-N:** How does the policy extricate itself from the role of an environmental police?

**Lersner:** We must tell the producers: if you want to continue practicing your market-economy oriented production methods despite those nonliberal impositions, then your conduct must be environmentally correct from the very beginning. If you do not voluntarily comply, then the government will step in. Giving them such a go ahead option is, from the standpoint of rightist politics, a much more sensible way. Government threatens with obligatory product recall when voluntarism does not work as expected.

**VDI-N:** Government thus constantly brandishes the "right to enforce" stick, doesn't it?

**Lersner:** We cannot waive our right to enforce. However, Germany's environmental policy is nevertheless moving along a liberal path. A good example is the economic audit decreed by Europa Union. The aim is here to let enterprises have environmentally correct production methods investigated by independent consultants. In some areas then can government inspection become unnecessary. It is the English who have already pushed ahead with it, but in Germany too we are catching on.

**VDI-N:** In the USA they want to limit pollution of the environment to a certain level negotiable among enterprises established in an area by issuance of certificates. Would this be feasible in Germany?

**Lersner:** Certificates and problem solving by certification are often overrated, above all by theoreticians. In practice they are, for political reasons, in many cases not acceptable. When a chemical enterprise explains that it could reduce its emissions but doesn't do it because it has been issued pollution allowance certificates, then its residential neighbors would band together for a confrontation. Certificates may, however, be helpful when pertaining to emissions not harmful to the neighborhood as, for instance, to reduction of the hot-house gas carbon dioxide.

### **Metallurgical Industry Reduces Pollution**

94WN0392D Duesseldorf VDI NACHRICHTEN  
in German No 32, 12 Aug 94 p 16

[Article by Dr. Stefan Gara, product manager for environmental engineering at Voest-Alpine Industrieanlagenbau: "Pollutants from Metallurgical Plant Being Reduced" New process reduces dust and dioxin emissions from sintering plants]

[FBIS Translated Text]

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*Sintering plants can be a significant source of dioxins. A treatment tested in Austria could greatly reduce the amounts of this pollutant is briefly described in this article by Dr. Stefan Gara, Product Manager for Environmental Engineering at the Voest-Alpine Industrieanlagenbau [Industrial Plant Construction] (VAI) in Linz.*

VDI-N, Duesseldorf, 12 Jul 94.

Iron ore sintering plants of the steelmaking industry emit significant amounts of pollutants. The fineness and the composition of dust particles suspended in the exhaust gas along with particles of heavy metals, hydrochloric acid, hydrofluoric acid, and sulfur dioxide impose most stringent requirements on the purification treatment. Plant operators are since recently being more strongly pressured regarding this, after it became known that sintering plants are a significant source of dioxins and furans. The combined content in the emissions from these plants is appreciably higher than in the emissions from incinerator plants.

At the Voest-Alpine Stahl [Steel] (VASL) in Linz the push for a more aggressive implementation of the officially mandated dust reduction requirements, less than 50 mg per cubic meter of exhaust air, became the key incentive for development of a new exhaust gas purification treatment. The goal set jointly by VASL and VAI was not only getting a firm grip on dust emission but also development of a comprehensive method of minimizing the release of dioxins and furans while inhibiting the regeneration of polychlorinated hydrocarbons. Simultaneous removal of several pollutants was thought to be economically very attractive.

The first high-tech facility with "Airfine" treatment facilities began operating in August 1993. In this plant, located in Linz, exhaust gas is first cooled down to the water vapor saturation temperature at a rate of of 500,000 m<sup>3</sup> per hour. At the same time wash water absorbs the acidic gas components such as HCl and HF while the coarse dust particles are extracted. The key component of this facility is a sequential-duty precision washer with binary-mixture nozzles especially developed for extraction of fine dust. The wash water picks up not only iron oxides along with carbon and silicon compounds but also salts and heavy metals. The "dirty" part of the water stream is regularly sluiced off to the purification facility.

Purification of the sludge is a two-stage process: recovery of iron and precipitation of heavy metals. In the first stage takes place precipitation of iron compounds, whereupon the squeezed out filter cake is returned to the sinter belt. In the second stage takes place precipitation of sulfate, namely gypsum, containing sparingly soluble hydroxides and sulfides of the extracted heavy metals. Immobilization of the precipitates by addition of slag from VASL's own steelmaking plant facilitates a reliable surface dumping of the residue ingredients without changing the classification of their respective eluates. It is technically possible to intensify the extraction of salts from the sludge by vaporization and to then make them available for use, say, by the aluminum industry.

This technology reduces the emission of dioxins already down to 10 % during normal plant operation alone. Heavy

metals are the principal catalysts of dioxin and furan regeneration at high temperatures when oxygen and chlorine along with carbon are around. Heavy metals are used as additives for ores in the sintering process, where they form chlorides in the sinter bed and evaporate as such from the high-temperature zone. A year-long trial operation has shown that, by rapidly cooling the exhaust gas to temperatures below 50°C, "Airfine" treatment does inhibit regeneration of dioxins. The catalytically active coarse dust is being extracted at the same time.

Extraction of the residue ingredients from the sedimentation trough and from the sludge purification facility makes it possible to return the part of the sludge stream carrying dioxins back onto the sinter belt, where thermal destruction of dioxins and also furans takes place at 900-1100°C temperatures.

Selective extraction of heavy metals from the residue circulation loop will furthermore appreciably reduce secondary emissions and thus minimize the formation of dioxins. It thus becomes possible to reduce, without additional measures, an up to 5 ng/m<sup>3</sup> dioxin emission index in the raw exhaust gas to a 0.3-0.5 ng/m<sup>3</sup> waste air index in the purified gas.

In conventional exhaust gas purification systems with electric filters for sintering plants the incident dust is returned onto to sinter bed without prior treatment. Inasmuch as in this case heavy metals and alkalis are not removed from the inner residue circulation loop, continuous accumulation of dioxins and furans gives rise to secondary emissions and the resulting higher rates of dioxin and furan formation then trigger a *de novo* synthesis.

As the first countermeasure for reducing the rather high rate of dioxin emission, several sintering plant operators have recently resorted to minimizing the return of dioxins from both the inner steelmaking loop and of the residue back to the sinter belt. This has been done above all where oil-covered chips, the residue from rolling mills, are found. Elimination or even a mere slackening of this recycling process is of a questionable benefit from the standpoint of long-term concerns about the environment and inevitably creates problems elsewhere, which could involve large additional costs.

Since recently emissions from sintering plants are under discussion, in Germany particularly. Current estimates are based on the premise that sintering plants emit dioxins at a rate 20 to 40 times than do local incinerators, according to a complete conversion of the 17.BimSchV. Primarily because of the costs involved, there is however some opposition to implementing an exhaust gas purification technology as has for a long time been customary in power plants and incinerators. The argument of high costs can be weakened by reducing it to relative terms, insofar as the higher cost of the sintering process would still amount to less than 1 % of the total cost of the end product. As a counterargument, moreover, can serve the proposition that it is becoming more likely feasible to process residue ingredients on the sinter bed without exceeding legal emission limits rather than to dispose of them into dumps or other facilities at a steadily rising cost.

**Study Shows Dioxins Weaken Immune System***994WN0392E Duesseldorf VDI NACHRICHTEN  
in German No 32, 12 Aug 94 p 16*

[Article by Ursula Schiele-Trauth: "Dioxins Weaken Immune System"]

[FBIS Translated Text] *VDI-N, Duesseldorf, 12 Aug 94*

Following the dioxin accident on 17 November 1953, management of the Baden Aniline and Soda Works [Baden Anilin und Sodafabrik] (BASF) in Ludwigshafen had initiated a new study of its effects on personal health. For the first time diseases severely affecting persons worldwide will be systematically analyzed. "It is now becoming known that not only chloracne but also diseases of the thyroid gland as well as infectious diseases of the digestive tract and of the upper respiratory tract have increasingly occurred" said Prof. Andreas Zober, director of the BASF Occupational Medicine and Health Protection Department, commenting recently on the results of this study at a meeting in Ludwigshafen.

Dioxins evidently weakens the human immunity system. "We also found more psychological disturbances and benign tumors in persons afflicted with severe chloracne" said Zober. Individual cases are reported where still today patients have not quite recovered from this disease.

The cause of the industrial accident in the BASF was an uncontrolled decomposition reaction in the pressure vessel during production of trichlorophenol. Vapor escaping from the vessel precipitated in the form of a white sediment all over the factory premises. Within several days after the event some employees working near the reactor or later helping with the cleanup showed symptoms of grave acute ailment. They began coming down with most severe eczemas, nausea, vomiting spells, fever, and irritation of the upper respiratory tract. More employees fell ill during later during the protracted months long cleanup operation.

The substance responsible for these disastrous effects, 2,3,7,8- tetrachlorodibenzo-p-dioxin (TCDD), was until then unknown. Only four years later, in 1957, was TCDD chemically identified. Often called simply dioxin, or nicknamed "superpoison" after that chemical accident in Seveso, TCDD is today known to be the most toxic member of a large group of closely related highly chlorinated or bromated dioxins.

The long-range BASF study concerning that dioxin accident helps evaluating externs' diagnoses of diseases incurred by people over the almost 40 years since. Out of a total of 254 known cases, 158 employees still alive today were selected for the study. Within the first year following the accident those over 60 years old had to some extent been exposed to appreciable dioxin concentrations. A control group of BASF employees unhurt was included as a reference for comparison. Diagnoses based on all doctor's visits by everyone during the past 40 years are deposited in the Company's files and can be made available to the Company's Medical Department. Zober estimates the extent to be over 10,000 episodes of sickness. "Quite possibly such evaluations have only since 1989

been generally recorded with names deleted so as to ensure privacy and data protection after Health Reform became law in that year."

Not only during the first few years after the accident but also during the entire 40 years after did all persons who had absorbed dioxin fall ill up to 50 % more often than those in the control group. "Earlier one could estimate the original dose of absorbed dioxin only by the chloracne level" said Zober, "because not before the end of the nineteen eighties has it become possible to measure dioxin levels in blood." Since then dioxin levels have been determined in the blood of many persons witnessing that accident. Even today can the original dioxin dose be still deduced, because dioxins have a very long biological half-life: TCDD having one about seven years long.

According to the readings of dioxin-in-blood levels and calculations made using a specially developed mathematical model, the results of this study yield an estimate of the total original dioxin content in the entire BASF complex. Thus evidently the blood fat in one third of individuals at the site absorbed more than 1000 ppt [parts per thousand] ( $10^{-12}$  concentration). Today, according to Zober's data, the normal level for humans is below 3 ppt.

The quantitative data obtained by this backtracking procedure allow one to draw conclusions about the dioxin dose-effect relations over a period of just under 40 years. A future study should clarify whether a dose-effect relation exists between dioxins and cancer. Whether dioxins cause cancer is still being debated among toxicologists. According to the results of studies made so far, humans exposed to high doses of dioxins must after a latent period of 20 years must expect a twice as high probability of death due to cancer.

**NORWAY****Environmental Foundation Endorses EU***95P20096A Oslo AFTENPOSTEN in Norwegian  
26 Oct 94 p 2*

[Article by Morten Fyhn: "Bellona Wants To Be in EU Even if Norway Says No"]

[FBIS Translated Text] Brussels—Bellona may relocate its activities to an EU [European Community] country if Norway says no to membership, according to its president, Frederic Hauge.

"The EU bureaucracy really moves. You can certainly get through in the system if you have done your homework," the leader of the environmental foundation Bellona said yesterday [25 October] after a meeting with the European Commission's experts on nuclear safety. Hauge, together with nuclear expert Nils Bohmer, had been invited to Brussels to follow up on Environment Commissioner Ioannis Paleokrassas' recent visit to Norway and the Kola Peninsula.

In a clear reference to those persons in Norway who accused Paleokrassas of empty promises and who even called him "hotlips from Greece," when the commissioner

promised strong EU support against Russian nuclear pollution close to Norway, Hauge said that the train was already rolling. "This must be one of the most useful things Bellona does," he said following meetings at the Commission's Directorate for Environmental Protection and Nuclear Safety.

The two Bellona representatives also met with Russian, Japanese, and EU-member experts.

The tangible result of this first meeting between Bellona and the Commission was that the Norwegians were asked to organize a meeting of experts in Norway two weeks from now and also to arrange a meeting in Murmansk. Hauge and Bohmer point to this as proof that Paleokrassas and the Commission were serious about what was said in Norway. But further developments will to a great extent depend on the outcome of Norway's referendum on EU membership.

#### Under Foreign Flag?

The idea of giving Bellona an official advisory position with the Commission would be difficult to realize as long as Norway remains outside the EU. The same applies to receiving funds from the EU. "It would be to great advantage if Norway says yes to the EU. If the referendum outcome is a no, we may have to relocate most of our activities to an EU country," Hauge said yesterday.

So far Bellona is very pleased with its contacts with the EU.

"We not only got what I was hoping for, but then some, from that meeting," the leader of Bellona said, adding that the effort for increased nuclear safety and lower pollution is the single most important thing that Bellona presently is working on. Hauge does not doubt that even if Norway says no to membership, the EU will remain interested in these issues, but he added that extent to which the EU would contribute will relate very closely to whether or not Norway joins.

"As an EU member, Norway can make this issue receive higher priority both politically and economically. There is a big difference between being inside or outside the EU when it comes to influencing the EU on the issues of nuclear safety and nuclear research," Hauge said.

### SWEDEN

#### Energy Minister Seeks Multiparty Agreement on Nuclear Power

BR2510100894 Stockholm DAGENS INDUSTRI  
in Swedish 20 Oct 94 p 9

[Report on interview with Energy Minister Jorgen Andersson by Pia Gideon-Sorman; date, place not given: "Gas Will Replace Nuclear Energy"]

[FBIS Translated Text] Newly-appointed Swedish Energy Minister Jorgen Andersson has set his sights on a new energy agreement between the Social Democrats, Liberals, and members of the Center Party. Gas from Norway and biofuel will replace nuclear energy, which will be phased out.

Jorgen Andersson, who used to be a local councilor in Halmstad, has been involved with energy issues for a long time. For 12 years now he has had a seat on the board of Sydkraft and been shaping his own view of Swedish energy policy.

Now he is reticent about saying whether a reactor should be shut down during the term of the present government, pointing instead to the government declaration contained no such promise. He also wants to await the outcome of upcoming work by the Energy Commission.

On the other hand, Jorgen Andersson believes that the 1980 referendum, in which he himself voted for alternative two, clearly showed that the Swedish people decided nuclear energy should be phased out.

"It is primarily gas and biofuel that will be phased in when nuclear energy is phased out. I find it difficult to turn to oil and coal which would create new problems with emissions," said Jorgen Andersson.

#### Carbon Dioxide Target Will Be Reached

When asked whether Sweden can afford to follow the Rio agreement and freeze carbon dioxide emissions, Andersson was uncompromising.

"We must achieve those carbon dioxide levels. It may cost money, but we will get better air," Andersson said.

However, the energy minister is now moving quickly with a view to being able to present a bill on electricity deregulation within one or two weeks. This means he will not be waiting until the Energy Commission's interim report has been published.

As a result, the energy industry will soon be told what the conditions that will apply in the market will be.

When it comes to the question of foreign trade in electricity, Jorgen Andersson's view differs from that of his predecessor, Per Westerberg. Jorgen Andersson is not calling for any state control of foreign trade in electricity.

#### Vattenfall Will Guarantee Control

"Today it is the power companies which are already taking care of foreign trade, in Baltic Cable, for example. The state owns Vattenfall [Sweden's central electricity board], which is a part owner of the cable and thereby exerts general influence. I believe that works well, but one precondition for exporting electricity is that supplies in this country are safeguarded," Jorgen Andersson said.

Jorgen Andersson stressed that he wants to increase Nordic cooperation and his thoughts are circling around the old gas project with pipelines from Norway to Finland crossing Sweden. He is also thinking about a gas-fired power station in Sweden that is owned by several Nordic countries.

He dismissed the idea that Sweden could instead import ready-to-use electricity won from gas from Norway. "Norwegian public opinion can hardly be prepared for the construction of a gas-fired power station for exports that would generate emissions when they themselves have hydroelectric power, which is the purest there is," Jorgen Andersson said.



When asked whether the power industry would be given the go-ahead to proceed with the complete overhauling of its nuclear reactors, as has happened with reactor O1 in Oskarshamn, so that they can be operated for another 25 years," Jorgen Andersson sounded resigned.

#### No Means of Control

"We have no means of control at present, nor do we have any laws that can prevent the industry from overhauling its reactors. When the Energy Commission has issued its final report I will, if necessary, be prepared to have a view," Jorgen Andersson said.

He intends to stand up for a broad agreement between the Social Democrats, the Liberal Party, and the Center Party on the question of how nuclear energy should be phased out.

"It takes seven years from the decision to the time new energy production can be up and running, and a term of office is only four years," Jorgen Andersson said.

### UNITED KINGDOM

#### Paper Reveals Dangers of Nuclear Waste From Old Submarines

MS2310112494 London INDEPENDENT ON SUNDAY  
in English 23 Oct 94 p 3

[Report by Geoffrey Lean and Cyril Dixon: "Atom Waste Grows as Submarines Rot"; report is accompanied by drawn maps]

[FBIS Transcribed Text] Dangerous radioactive waste is piling up secretly in two British ports, as the country's ageing nuclear submarines are retired.

Eight of the boats are moored indefinitely in two "nuclear graveyards" at Devonport in Plymouth and Rosyth on the Firth of Forth, and today the Independent on Sunday publishes the first maps pinpointing them.

A special investigation has revealed that the two nuclear sites contain seven and a half highly irradiated reactor cores, 43 packages of extremely toxic nuclear "crud", and eight radioactive submarines—including HMS Conqueror, which sank the Argentinian cruiser General Belgrano in the Falklands War.

Each site is within a mile of houses and near schools and playing fields. The local council at Rosyth has formally complained to ministers that it is not given details of the more dangerous waste, and the Government's official radiation inspectors say that much of it is outside their jurisdiction.

Yesterday Prince Andrew bade a ceremonial farewell to a ninth nuclear submarine—HMS Resolution, the first of the Polaris missile fleet to enter service—consigning it and its wastes to storage at Rosyth.

Yet the Government has no plans to treat or dispose of any of the waste the submarines have produced. A spokesman for the Ministry of Defence said last week: "Ministers are kept constantly aware of the situation, but we are very much in a 'wait and see' situation."

Much of the waste, on present plans, will be kept at the ports until at least 2010. Experts expect several more submarines to enter the graveyards in the next five years.

Last night Dr David Clark, the opposition defence spokesman, said that he would write to the Defence Secretary, Malcolm Rifkind, to voice his concern at the results of the Independent on Sunday's investigation. He said: "Nuclear waste has been allowed to build up near the centre of these two ports through chronic inaction and lack of foresight, and the Government seems happy for local residents to be exposed to the danger indefinitely."

Ministers have no policy for dealing with Britain's defunct, radioactive submarines.

Dreadnought, the first of Britain's atom-powered submarines has been tied up to the dockside at Rosyth for 12 years. Churchill joined it in 1990 and Swiftsure in 1992, while Revenge is in a nearby dry dock being prepared for what the Defence Ministry calls "storage afloat".

Conqueror, Warspite and Courageous have all been moored in a dock at Devonport during the last four years, and Valiant, taken out of service this summer, is waiting to join them.

This extraordinary cold storage of "hot" subs has been allowed to develop because little thought was given, when they were built, as to what to do with them when retired.

Six years ago, a senior civil servant at the Ministry of Defence, Mr J Peters, told the House of Commons Select Committee on Defence: "The Admiralty decided—God bless it—to go into nuclear propulsion for submarines in the early 1950s... There were quite enough problems to contemplate at that time without thinking too much about what on earth we should do with it when we were finished with it."

When the Ministry did get round to thinking about disposal, it decided to fill the submarines with concrete and sink them in the north-east Atlantic.

This plan was frustrated when in 1983—before any of the boats could be scuttled—public concern led to a worldwide ban on the disposal of nuclear waste at sea by the London Dumping Convention. But the Government did not abandon its policy until last February, when it reluctantly accepted that sinking the submarines would never be possible under international law.

The Ministry told the Independent on Sunday last week: "The decision is to store them safely afloat at the location where they were decommissioned until a national decision about a long-term disposal route for such items has been taken. We would not do it if it was not safe. The Royal Navy is not in the business of trying to frighten people."

But the carcasses of the vessels are only part of the massive nuclear waste problem facing Devonport and Rosyth. There are three kinds of waste, and the Ministry of Defence has no idea how to get rid of any.

First there are the highly irradiated cores of the nuclear reactors. The reactors, each about the size of a large dustbin, are taken out of the submarines when they are decommissioned. In the past these have been sent to

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Sellafield, the Cumbrian nuclear complex, where the ministry says they will be "reprocessed" into reusable fuel and nuclear waste.

Thirty six of them are now stored at Sellafield, and not one ounce has yet been reprocessed. British Nuclear Fuels, which runs the complex, says: "What happens in the future is a confidential matter between us and the Ministry of Defence," but senior Whitehall sources say that in fact there are no plans to hide.

No one knows how to reprocess spent submarine fuel, which the independent nuclear consultant John Large estimates to be 20-30 times more radioactive than the civilian reactor fuel treated at Sellafield, and which is made of nuclear bomb-grade uranium mixed with zirconium. No existing plant can treat them, and there are no plans to build one that can.

For the past three years the reactors have not even been taken to Sellafield, but stored at the ports, because the Department of Transport belatedly accepted a 1985 finding by the International Atomic Energy Authority that the containers used to transport them through England and Scotland were unsafe.

Devonport Management Ltd (DML), which manages the dockyard for the Navy, says that the number of reactors at the port is "classified". But the Independent on Sunday has established that there are five there—three in a cooling pond, the fourth in one of the condemned containers, and the fifth aboard Valiant. At Rosyth, there is a reactor and a half in a cooling pond, and one in another container—these will be joined by the reactor from Resolution.

New internationally approved containers are being designed, but these will not be ready until 1997 at the earliest.

In the meantime the Ministry is planning to ease the growing crisis by transporting the reactors to Sellafield in "interim flasks", starting in the next two months, though the junior defence minister Roger Freeman admits these "are not seen as the ideal long-term solution".

The second waste problem is a nuclear "crud" from cleaning out the submarines' radioactive pipes, which is both radioactive and chemically toxic. DML admits that this, which it says "looks for all the world like demarara sugar"—poses "the main storing problem".

It was dumped at sea until 1983, but now there are 23 containers of it at Devonport and 20 at Rosyth. Again nobody knows what to do with them. The Ministry hopes that they will eventually be buried in a deep underground dump, proposed for Sellafield. But this will not be ready until 2010 at the earliest, by which time, says DML, there will be 180 containers stored at Devonport.

The third category of waste is the 850 tons of irradiated metalwork and pipework of the reactor compartment of each submarine. Denied the chance to sink it, the Ministry is again having to hope that it can be dumped in the putative Sellafield depository. But this means leaving the growing number of submarines moored in their nuclear graveyards for at least another 16 years.

Then they will have to be cut up to fit down the dump's shaft, which will expose workers to radiation.

William Peden of Greenpeace says that the waste could be kept safely in specially constructed stores away from populated areas. "But there does not seem to be any political will or urgency on behalf of the Government to do anything about this growing crisis."

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